



November 09, 2018  
**GLOBALSTAR INCORPORATED**  
 GSAT/NYSE

**Continuing Coverage: Globalstar Inc.**  
**- Will the Stars Align for Troubled Telecom?**  
**Investment Rating: Market Outperform**

PRICE: \$ 0.35 S&P 500: 2,781.01 DJIA: 25,989.30 RUSSELL 2000: 1,549.49

- High leverage and equity dilution endanger future launches
- Incumbent competitors dim Globalstar's revenue growth potential
- Corporate strategy and dissenting shareholders mark cloudy skies
- Telecommunications technology rockets forward while Globalstar feels pressure to keep pace
- Spectrum asset may prove a valuable ray of light through overcast skies
- Investor's risk tolerance should match Globalstar's high flying fleet
- Our 12-month target price is **\$0.48**.

Valuation	2017 A	2018 E	2019 E
EPS*	\$ (0.08)	\$ 0.06	\$ (0.08)
P/E	NM	5.7x	NM
CFPS	\$ 0.01	\$ 0.01	\$ 0.00
P/CFPS	41.1x	56.6x	347.4x

\* Excluding non-recurring items

Market Capitalization	Stock Data
Equity Market Cap (MM): \$ 446.63	52-Week Range: \$0.32 - \$1.62
Enterprise Value (MM): \$ 921.52	12-Month Stock Performance: -77.81%
Shares Outstanding (MM): 1,265.60	Dividend Yield: Nil
Estimated Float (MM): 574.78	Book Value Per Share: \$ 0.13
6-Mo. Avg. Daily Volume: 4,091,000	Beta: 1.51
Short Ratio: 31.64	EV/EBITDA: 41.6x

**Company Quick View:**

Not unfamiliar with volatility and the difficulties facing a capital-intensive business, **Globalstar, Inc.** has fallen on tough times as it seeks to create organic growth through new spectrum allocations and increasing product penetration. Globalstar offers premier satellite telecommunication and asset tracking services. The Company is headquartered in Covington, Louisiana.

**Company Website: [globalstar.com](http://globalstar.com)**

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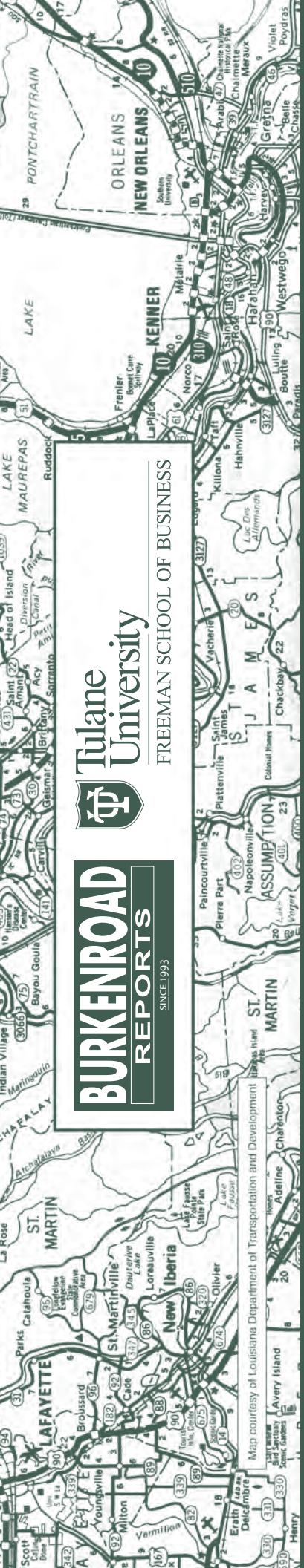




Figure 1: Five year Stock Price Performance



**INVESTMENT SUMMARY**

The team gives **Globalstar, Inc.** an investment rating of **Market Outperform** with a 12-month target price of **\$0.48** per share. Table 1 shows the key metrics from the past three years of coverage for Globalstar.

**Table 1: Historical Burkenroad Ratings and Prices**

Report Date	Stock Price	Rating	12 Month Target Price
11/17/2017	\$1.62	Market Outperform	\$2.50
11/14/2016	\$0.86	Market Underperform	\$0.75
11/06/2015	\$2.10	Market Outperform	\$2.60

The Mobile Satellite Service (MSS) industry has evolved from primarily a satellite telephone service market at its inception to a diverse group of product and service offerings, including solar powered asset tracking, advanced speed and connectivity, and portable wi-fi hotspots. Providers have begun to search for additional monetization routes, and have expanded products to include asset trackers, machine to machine communications, and satellite wi-fi hotspots. MSS revenues are primarily driven by subscribers.



A company's ability to attract and gain subscribers is dependent on service coverage, product quality, competitive pricing, and ability to reach end users through retail stores like Cabela's, Bass Pro Shops, REI, and other outfitters. Quick monetization of MSS assets, including valuable spectrum band licensing, has proven to be an industry wide challenge. Globalstar currently hopes to monetize its band 53 2.4 Ghz spectrum within the next year and a half, which would provide long-term, steady cash flows to complement its core business. If Globalstar can license its spectrum capabilities, it would significantly change the profitability of the Company.

Globalstar's long-term debt obligations and fiscal position pose a serious threat to Globalstar's operations and longevity. The Company's debt position and stock performance have put it at risk of violating its debt covenants. Rising interest rates exacerbate an already stressed liquidity situation for the Company. In the context of the larger macroeconomic landscape, Globalstar has had access to cheap capital and historically low interest rates for the past ten years. During this period, Globalstar deployed a second-generation fleet of satellites, beginning in 2010, and successfully grew subscribers at a modest rate. However, the Company's growth mirrors that of the slow-moving industry. The Company faces impending liquidity concerns and additional capital expenditures. Management intends to raise capital through additional equity raises or through subordinated debt issuances as they have successfully done in the past decade.

Major events are transpiring at Globalstar and within management that weaken Globalstar's overall outlook. News sources have speculated that the failed merger between Globalstar and FiberLight was due to "dissenting shareholders." On September 28, 2018, Mudrick Capital Management and Warlander Asset Management filed a shareholder's derivative lawsuit that claimed the CEO, James Monroe, III, and others were liable in a breach of fiduciary duties. Regardless of the outcome of the lawsuit, it displays the tense climate and rocky investor relationship that management struggles with as displeased shareholders begin to act against them.

## **INVESTMENT THESIS**

**Globalstar** has had a tumultuous year to date. The Company has battled a declining stock price, a failed acquisition opportunity, and the removal of its Chief Executive Officer (CEO). Globalstar's stock has been trading below \$1.00 since early February. The Company's growth relies heavily on expanding its subscriber base, which has seen modest gains driven by its performing product lines. The Company offers superior service clarity in a niche market, catering to the needs of recreation and specialized consumers. However, it is unclear if the Company's cash flows can sustain the massive capital expenditures needed to maintain its fleet of satellites and to compete with other technologies and competitors.



### **High leverage and equity dilution endanger future launches**

As of June 30th, 2018, Globalstar had \$400.7 million in long-term debt and is financed primarily by a credit facility the Company entered into to develop and launch its second-generation satellites. The agreement dictates a rising interest expense Globalstar must service over the facility's lifetime, and after the second quarter of 2018, the Company stated that it will have to refinance to make debt repayments. The Company's consistent inability to generate positive free cash flow could scare away potential credit lenders. The prospect of a capital markets transaction is also limited given the current price of Globalstar stock. As of late September 2018, the Chairman of the Federal Reserve, Jerome Powell, announced that the federal funds target rate would be 2.25%. The Federal Reserve has indicated that the target rate is likely to continue rising as the Open Market Committee works to move away from a period of historically low interest rates. Rising rates will create increasing pressure on Globalstar as the cost to service any variable portion of its debt increases. Rising rates will also impact the ability and practicability of Globalstar to acquire new debt.

### **Incumbent competitors dim Globalstar's revenue growth potential**

Globalstar's revenues are primarily derived from its subscription-based services, which account for nearly 90% of its revenues. Globalstar's scalability is in direct proportion to its ability to attract new customers and to service new markets. The satellite telecommunication industry is highly competitive. Industry incumbents such as Iridium, which have a stronger financial position, a younger satellite fleet, and the ability to offer coverage anywhere in the world, hamper Globalstar's ability to grow its subscriber base. A fundamental weakness of the satellite business is that telecommunications companies are unable to adjust their infrastructure supply to meet demand. A fleet of satellites is required to service a few subscribers or a million, and to effectively operate long-term Globalstar will need to grow its subscriber base to a level of profitability. Competitors like Orbcomm, Iridium, and Intelstat also make strategic moves regarding intellectual property, spectrum allocation, and Federal Communication Commission authorizations. The limited amount of spectrum makes utilization and efficiency key in determining what company will have a competitive advantage. In the past year, Globalstar expressed excitement about approval to use its S-band frequencies in the U.S. and Botswana. Globalstar will need to successfully monetize its S-band spectrum for mobile broadband use in many more countries if it is to remain competitive.

### **Corporate strategy and dissenting shareholders mark cloudy skies**

As of September 4, 2018, Globalstar welcomed David Kagan as the new CEO of the Company and transitioned James Monroe, III, the former CEO, to Chairman of the Board of Directors. In his new role, Kagan is responsible for the oversight of all satellite related business, while Monroe will focus on strategic financing and liquidity matters. This leadership change comes at the precipice of the dissolved merger between FiberLight LLC and Globalstar on August 1, 2018. Thermo Capital Partners, the Private Equity firm headed by James Monroe, III, orchestrated the merger.



The planned merger between FiberLight and Globalstar included much needed capital in the form of \$100 million in cash and 15.5 million shares of CenturyLink valued at over \$285 million. In the meantime, Globalstar is engaging in “strategic outreach” speaking with leading competitors, CEOs of major telecom companies, and financial institutions about the possibility of another transaction.

As of October 2, 2018, Mudrick Capital Management and Warlander Asset Management, two minority shareholders of Globalstar, filed a complaint for a direct and derivative lawsuit against James Monroe, III, accusing Monroe of stock manipulation and stockholder deception and insider trading, among other charges. The complaint states that Monroe utilized his position and interest in Thermo Capital and Globalstar with the intent to earn tens of millions of dollars off a merger at the expense of the Company and minority shareholders.

### **Telecommunications technology rockets forward while Globalstar feels pressure to keep pace**

The Satellite Communications industry is driven by constant technological advancements and service optimization. New LEO technology has allowed early adopters such as Iridium and Globalstar to boost service range and quality since 2013. However, competitors are consistently enhancing their fleet with billions of dollars in capital expenditures on new satellite data products and satellite systems. The Research and Development that goes into these products is immense, and constant innovation is needed to keep products up to date with the latest technologies. Globalstar will have to raise capital in the coming years to keep up with competitors in both the MSS industry and the encroaching cellular data services industry. This could mean issuing more debt at high interest rates on top of its current outstanding debts. Outside of the MSS industry, improvements in technology and range of ground based cellular networks could present a potential threat to MSS companies by stealing their market share.

### **Spectrum asset remains a valuable ray of light through overcast skies**

Globalstar is currently undergoing a third-generation partnership project (3GPP) spectrum certification process to standardize its spectrum to be included in Band 53. Once this process is completed, the Company will be able to monetize its most valuable asset, a 2.4 GHz spectrum S band capable of LTE usage. Management expects to secure 3GPP certification by the middle of 2019, at which point they will seek to partner with a current domestic wireless carrier. The value of the spectrum is dependent on several factors, including the strength of domestic carrier’s current balance sheet, spectrum competition in the market, current band utilization, and the industry consensus on the value of the MHz per population. In recent deals, similar spectrum bands have drastically ranged in value from \$0.10 to \$2.50 MHz/Pop.

Globalstar's spectrum currently operates at 2.4 GHz, which is below the 3.0 GHz cut off for use in cellular devices. The spectrum has a low power basis, which management believes could potentially deflate the value of the spectrum band.



However, the spectrum also has a single license from coast to coast, which management expects to inflate the value of the spectrum, since using the band requires less legal and compliance management.

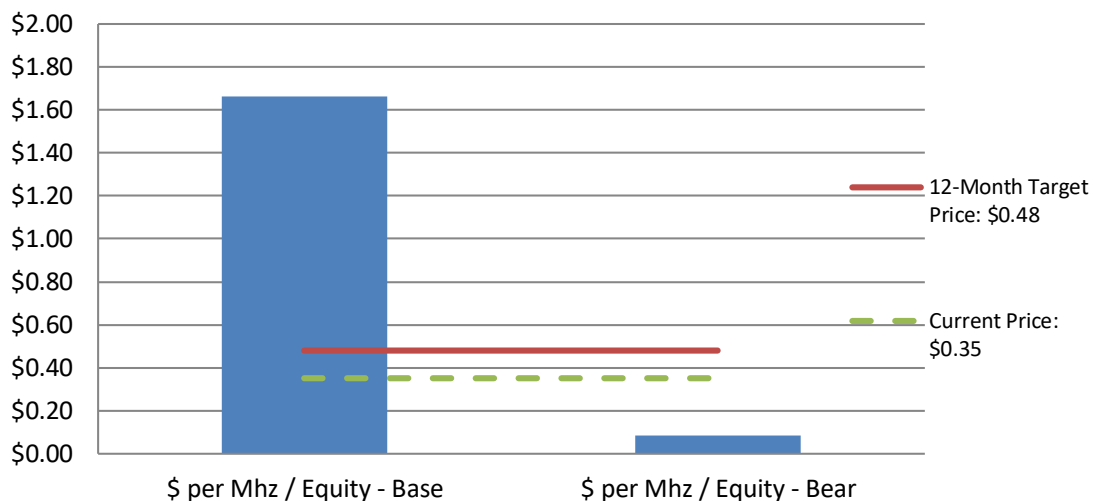
### Investor’s risk tolerance should match Globalstar’s high flying fleet

Globalstar is an investment for the most risk tolerance investors. The Company exhibits a level of instability that would ward off most investors with a moderate risk aversion. These risks mainly stem from Globalstar’s financial position coupled with the volatility of the underlying business fundamentals.

## VALUATION

To model a price per share, we had to employ a slightly less conventional strategy than a normal discounted cash flow or comparable multiple analysis because **Globalstar** lacks positive cash flows. We decided to value Globalstar’s equity based on the assumption that the Company successfully monetized its spectrum. Going forward, Globalstar’s equity could act like an option. The investment is highly risky with a chance of no return, but if Globalstar can monetize its spectrum, equity holders would be rewarded with a high payoff. This valuation model is highly dependent on the U.S. Dollar per MHz/pop that Globalstar can receive from a spectrum licensing deal. It is highly complex to value spectrum and very speculative to choose a price for a deal that has not occurred. We used a weighted probability for worst, normal, and best-case scenario for the value of U.S. Dollar per MHz/pop to arrive at our value per share (see Figure 2). Other key inputs in our valuation also include the bandwidth of 11.5 Hertz in Globalstar’s case and the U. S. population.

**Figure 2: Price Scenarios**





## **INDUSTRY ANALYSIS**

**Globalstar** is a global satellite provider that operates within the Mobile Satellite Services (MSS) industry. The MSS industry began because of lack of existing traditional cellular service in isolated and hard to reach areas. The MSS industry provides connection to an array of phones, transmitters, tracking devices, routers, and more for commercial users, governments, and individual consumers.

Mobile satellite services and connectivity will become more important over the coming years for emerging markets, disaster relief efforts, and remote areas. Industry growth is linked to how frequently new satellites are deployed and the saturation level of a company's current constellations. Since satellite launches are highly capital-intensive processes, growth in this industry is sporadic. Industry revenues are expected to grow over the next five years as current demand remains stable and companies begin to break into the emerging market segment. Additionally, new satellite technology will only further improve the quality, area, and speed of service as older satellites are replaced with new, LEO versions.

### **Industry Specifics**

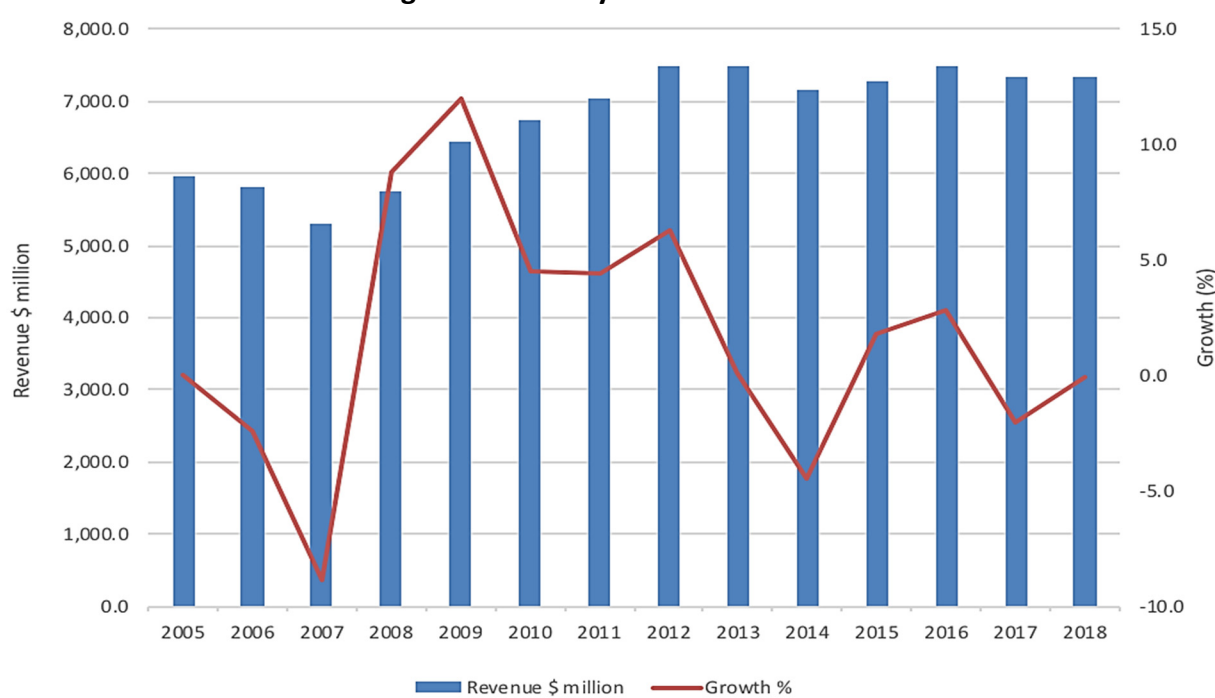
According to IBIS World, the Mobile Satellite Services industry is projected to generate \$7.3 billion in 2018 revenue. Private Network Services are projected to generate 24.8% of industry revenues this year. Private Network Services provide communication service, exclusively through satellite technology, between two unique end users in two distinct locations. These services are typically utilized in the maritime, aeronautical, and shipping markets where traditional land-based services are not available. Additionally, 32.1% of revenues are projected to be generated by carrier services and internet services, which include interconnectivity peer agreements between different satellites within another provider's constellation. Through their partnerships, MSS companies provide customers with higher data transmission capacity and less geographical intrusion than traditional telecommunication outlets. These advantages translate to faster, clearer, and more widespread service for MSS customers. Lastly, 43.1% of industry revenues are generated by internet access service and equipment sales. Customers can create a remote wifi internet hotspot through satellite connected modems and subscription plans. Equipment sales in the MSS industry are spread across devices that allow consumers to access the satellite network. These devices include fixed voice communication phones, wifi hotspot modems, mobile satellite phones, and satellite tracking devices.

Over the last five years, the MSS industry has been lagging at about a -0.4% growth rate in revenue per year (see Figure 3). This slight fall in growth was the result of the increasing cost of capital across the industry. However, the consensus is that the industry will grow 2.6% annually over the next five years. MSS industry growth is erratic due to high capital costs associated with designing and launching satellites. The MSS industry is made of 384 companies, with more early stage providers entering the industry each year. The growth of private space launch contractors such as SpaceX and the announcement of President Trump's "Space Force" has increased competition in the space launch industry.



This competition will likely have a positive impact on companies in the MSS industry as it may reduce costs to put satellites into space. Additionally, with recent advances in technology, satellites continue to become cheaper to produce with longer useful lives. Globalstar controls a minor share of the broader mobile satellite service (MSS) industry, possessing a 1.68% share of market revenues. Since these services are the only option for consumers in desolate areas that require dependable satellite connectivity, the MSS industry is relatively stable and resistant to larger macroeconomic trends with a beta of 0.97.

Figure 3: Industry Revenue Growth



Source: IBIS World, June 2017, "Satellite Telecommunications Providers in the US"

### Customers

Globalstar’s customers include individuals and corporations in need of communications equipment or tracking capabilities outside the range of traditional service providers. These customers predominantly occupy the recreational and personal, governmental, public safety and disaster relief, oil and gas, maritime and fishing, natural resources, mining and forestry, construction, and utilities and transportation markets.

The customer base for Satellite Communication companies is separated into four major categories: Commercial, Consumer, Governmental Organizations, and Telecommunication and Media companies. The commercial market is expected to command 35.9% of the \$7.3 billion total market this year. This segment will continue to play an important role in the industry since commercial businesses have built their companies around satellite services. There is currently no alternative to satellite services in the areas where these companies operate. For example, commercial fishing companies utilize satellite voice services to communicate between ships, data services to help predict and track weather patterns, and GPS services for emergency situations.





The next segment, consumers, also utilize satellite communication technology in recreational activities, such as hunting, backpacking, and fishing. Additionally, recreational fishing boats utilize satellite services for fast, reliable internet and mobile phone services. Operators have focused on improving the quality of satellite broadband service over the past years, justifying the higher price and making it more competitive with the traditional internet market. These service improvements have driven industry growth with consumers. According to IBIS World, consumers will account for 4.5% of revenue next year.

Government organizations, such as the Federal Emergency Management Agency (FEMA) and Homeland Security, make up 15.1% of the satellite telecommunications market. These services prove priceless in disaster relief and military operations where strong and dependable service is not only mission critical but needed to survive. Government organizations mainly purchase voice and location services.

Lastly, telecommunication and media companies make up the largest segment, representing 44.4% of the customer market. These companies purchase capacity from satellite companies that already have existing infrastructure networks, like Intelsat and SES SA. These companies have seen a moderate increase in demand as consumers transition from traditional cable services, such as Verizon, into free-to-air and internet protocol TV.

### **Regulatory Environment**

The MSS industry faces strict regulatory scrutiny. To operate satellites, obtain additional spectrum, or utilize new frequencies, providers must seek approval from their respective operating country's governing telecommunications regulatory authority. These governing bodies have strict guidelines on how much spectrum and which radio frequencies each company can use. These authorities possess a large amount of power and potential threat over Globalstar and all other companies within the MSS industry since their ability to operate globally is contingent on obtaining these licenses through government approval.

The Federal Communications Commission (FCC), the United States' governing body, is the largest of these governing entities. The FCC currently issues licenses that last 15 years, however, the FCC limits the number of licenses that a company may obtain on one bandwidth. Globalstar recently received authorization from the FCC to commission 25.225 MHz of radio spectrum, allowing improved satellite clarity and coverage to its customers. Globalstar's new spectrum band contains two blocks of noncontiguous radio frequencies in the 1.6/2.4 GHz band.

### **Bargaining Power of Suppliers**

Suppliers in the satellite communications industry have a moderate amount of influence on market growth and demand. Globalstar and similar companies rely heavily on aircraft and engine manufacturing companies, which develop the vehicles that transport satellites into orbit. The top four manufacturers account for 67.5% of industry revenue, making the industry somewhat concentrated with few substitutes. The logistics of a satellite launch are also influenced by the charter flight industry, which organizes and oversees rocket launches.



Concentration in this industry is relatively low, with the top three companies accounting for less than 10% of industry revenue. Communication equipment manufacturers and computer equipment manufacturers create the hardware and software components necessary for the construction and operation of satellites. These companies can utilize their position in the supply chain to heavily influence market prices, which impacts the costs that satellite communication companies face.

### **Bargaining Power of Buyers**

The MSS industry serves four major buyer markets: Consumers, Commercial, Governmental Organizations, and Telecommunication and Media companies. Consumers utilize satellite services for recreational activities, including fishing, hunting, and hiking. Commercial businesses, mainly located in the oil and gas, maritime and fishing, natural resources, mining and forestry, construction, and utilities and transportation markets, utilize satellite service in remote areas where traditional land-based service is unavailable. Governmental organizations, like the Federal Emergency Management Agency (FEMA) and Homeland Security, use satellite services because of their dependable, widespread coverage in disaster, military, and emergency situations. Lastly, Telecommunications and Media companies purchase bandwidth from MSS companies to improve coverage and quality of their service.

MSS customers turn to satellite communication when traditional wired and wireless service is not available. They are willing to pay a premium over traditional service providers for a stronger, more ubiquitous signal that caters to their unique business and recreational needs. Since these customers are typically in remote areas where there is no other communication, tracking, or data alternative to satellite services, they possess relatively low bargaining power over the industry. However, recent technological advancements in the quality and lifespan of satellites have driven prices lower, making MSS more competitive with traditional telecommunication services.

### **Competitors**

There is a moderate level of competition in the MSS industry. The barriers to entry in the MSS industry are relatively high, which gives large public companies like Globalstar an advantage. These barriers include high capital expenditures, a complex network development process, and a long timetable when implementing new satellites. Three large players in the industry are Iridium Communications, Intelsat S.A., and Orbcomm. Iridium Communications owns 68 satellites and is the world's largest commercial satellite communications company.

Iridium generated \$448 million in 2017 revenues and maintains a subscriber base of nearly one million people. Intelsat S.A. maintains an extensive network through the dynamic use of both fixed ground terminals and its satellite fleet, which allows for high-speed global coverage. Intelsat S.A. is significantly larger than Globalstar with a \$3.0 billion market capitalization. The company is in the final stages of releasing its next-generation satellite constellation. Orbcomm is a satellite communications provider of voice and data services and competes against Globalstar for its commercial businesses. The company also holds partnership agreements with Inmarsat PLC and Globalstar that allows the company to utilize and resell its satellite assets.



## **Barriers to Entry**

The barriers to entry in the satellite telecommunications space vary based on which industry segment within which a company operates. Infrastructure owners, which are companies who own and operate the satellites and facilities that relay signals, experience high barriers to entry due to the industry's high costs and highly capital-intensive nature. These companies spend between \$250 million and \$300 million to launch a single satellite and purchase expensive insurance plans to protect against mechanical failure.

To compete in the satellite telecommunications industry, a company also needs to obtain spectrum licenses from the Federal Communications Committee (FCC), as well as operating rights before a satellite can begin to orbit. This process can prove arduous, as separate regulatory agencies oversee the use of each frequency band in which a satellite operates. It takes over two years for a satellite to become launch-ready, which can make a new company susceptible to macroeconomic shifts and market changes.

Satellite resellers, which are companies that purchase and sell satellite equipment and aging assets, see lower barriers to entry than infrastructure owners. This is due to the low capital requirement necessary to sell satellite equipment on the open market. Many of these companies offer short contracts and sometimes operate in a single state. As satellite communication technology advances, the industry could see a drastic shift in barriers to entry, especially if the commercial use of advanced satellite systems sees lower capital expenditure and operating costs.

## **ABOUT GLOBALSTAR**

**Globalstar, Inc. (GSAT/NYSE)**, a Delaware corporation headquartered in Covington, Louisiana currently operates 21 facilities throughout the Americas, Africa, Europe, and Asia. Globalstar provides Mobile Satellite Services (MSS) for voice and data communications in more than one-hundred countries for over 700,000 subscribers in the industrial, governmental, and consumer markets. Customers can use Globalstar products to track machinery and vehicles, broadcast wifi internet, or make calls in remote areas that have little to no cellular network access. The Company currently owns and operates 24 Low Earth Orbiting (LEO) Satellites in its constellation.

## **History**

Ford Motor Company created Globalstar as a part of its aerospace division in 1991 before divesting its ownership to Loral Corporation and Qualcomm. In February 1995, Globalstar raised \$200 million in an initial public offering on the NASDAQ. On December 29, 1999, the Company received Federal Communications Commission (FCC) approval to sell satellite phone plans to consumers. In June 2001 Globalstar's stock price fell below \$1 and was delisted from the NASDAQ. In February 2002, it filed for Chapter 11 bankruptcy due to high operating costs and lack of liquidity. The Company was operating at a \$4 million monthly deficit. Globalstar reorganized and introduced a new business plan, which included cutting its service pricing structure by 80% to compete with the cellular market.

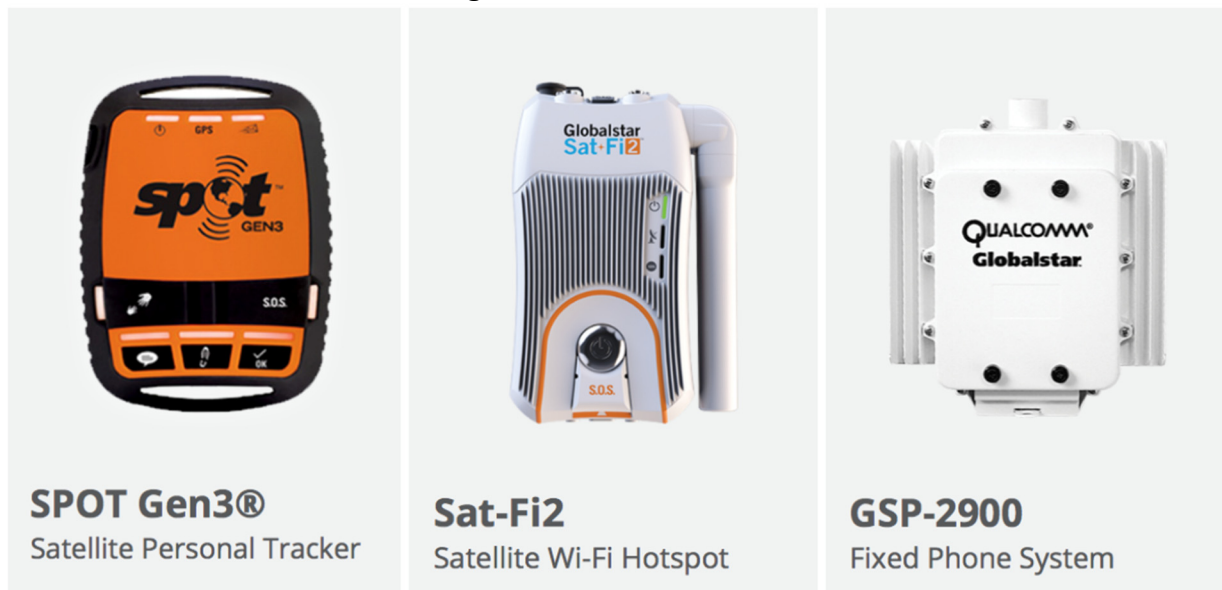


In April 2004 Thermo Capital Partners, a diversified investment holding company out of Denver, Colorado acquired 81.25% of Globalstar for \$43 million, and has remained a controlling investor since.

## Products

Globalstar provides a variety of mobile satellite services, data, and equipment to customers, including fixed satellite phones, portable phones, two-way voice and data communication modems (Duplex), one-way voice and data communication modems (Simplex), and SPOT satellite tracking devices. These products focus on providing satellite services to consumers in sparsely populated and hard to reach places where neither traditional cellular nor wired connectivity are available. The GSP-2900 fixed phone, the SPOT Gen3 Satellite personal tracker, and the SatFi-2 Satellite Wifi hotspot are among its bestselling products (see Figure 4).

**Figure 4: Various Products**

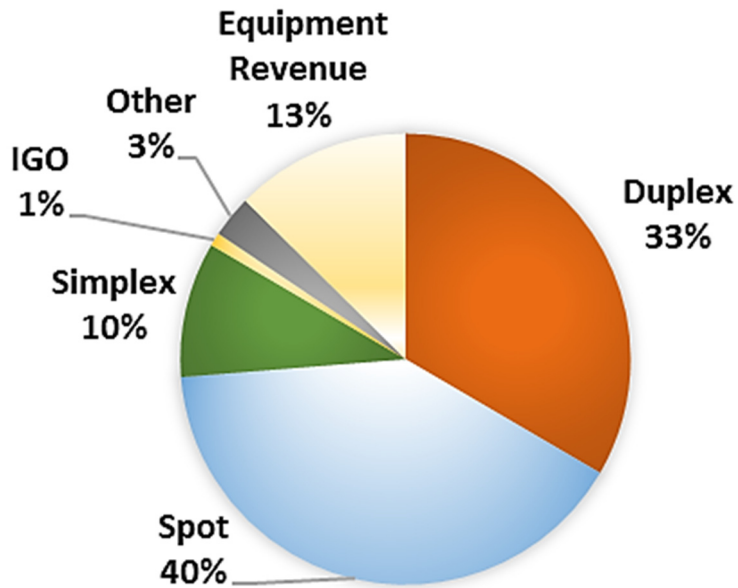


*Source: Globalstar's 2017 10K Report*

The majority of Globalstar's revenue comes from the U.S. and Canada. The Company's service segment brought in \$98.5 million, and its subscriber equipment segment generated \$14.2 million in revenue in 2017. Service revenues by percent of total revenue in 2017 for Duplex, SPOT, Simplex, IGOs and other were 33%, 40%, 10%, 1%, and 3%, respectively. Equipment revenues by percent of total revenue in 2017 for Duplex, SPOT, Simplex, and IGOs were 2%, 5%, 5%, and 1%, respectively (see Figure 5).



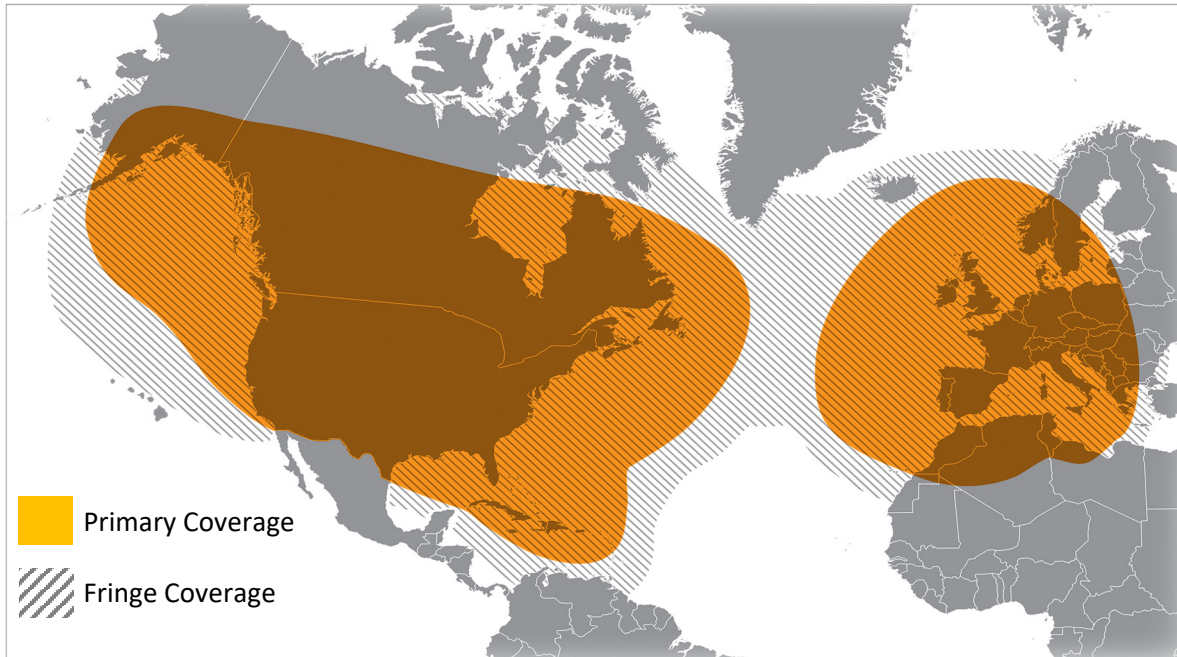
Figure 5: Service and Product Revenue



Source: Globalstar's 2017 10K Report

Globalstar's customers predominantly occupy the recreational and personal, governmental, public safety and disaster relief, utilities and transportation, oil and gas, maritime and fishing, natural resources, mining and forestry, and construction markets. Globalstar's products are sold through a variety of independent agents, dealers, and resellers. The Company also has distribution relationships with several large retailers and other distribution agents, including Bass Pro Shops, Cabela's, REI, and Fry's Electronics.

Globalstar's products rely on an array of LEO satellites, which allow the Company to increase its signal range and decrease transmission delay due to the shorter distance signals must travel in comparison to geosynchronous systems. Geosynchronous systems place satellites in a higher orbit which matches the rotation of the earth, appearing stationary in relation to a point on the ground. A LEO satellite system shortens the distance traveled by 42,000 nautical miles. This gives Globalstar a competitive advantage in its products transmission and reception clarity. Globalstar's products cover a large portion of North America, Europe, and of the Atlantic and Pacific Oceans (see Figure 6).

**Figure 6: Globalstar Product Coverage Map**

*Source: Globalstar.com*

## Corporate Strategy

Globalstar aims to provide the highest quality Mobile Satellite Service reception to its subscribers, who often are in remote, underserved, and disaster-stricken areas. Beginning in 2000, Globalstar started selling satellite phones to the public and continued to add new products and services in the early 2000's. Despite this growth, the telecommunications industry struggled in the early 2000's and Globalstar's capital requirements led the Company to bankruptcy. During this time Globalstar L.P. was acquired by Thermo Capital Partners LLC. This acquisition gave Thermo Capital control of the new Globalstar Company, which it continues to maintain as a parent organization.

Thermo Capital, a private equity firm, focuses on growing small to medium-sized businesses. Thermo invests in telecommunications, business services, industrials, and tech. Thermo has invested \$700 million into Globalstar since 2004. From 2010 to 2013 Globalstar utilized a \$1.1 billion investment to launch its second generation of LEO satellites. Globalstar's debt, stemming partially from 2013 convertible notes, now creates a liquidity concern for management. In the spring of 2018, the Company developed a plan to merge with FiberLight. FiberLight is a landline company and is owned by Thermo Capital. On August 1, 2018, the planned merger of FiberLight and Globalstar was terminated. The merger was terminated due to a minority shareholder disagreement on the value of assets at FiberLight.

Without the merger and no certain transaction on the horizon, Globalstar's management will take time to consider its next course of action. The potential merger of FiberLight and Globalstar was partially attractive because of the impending liquidity needs of Globalstar, and management believed the strategic pooling of assets would lead to long-term financial stability.



Globalstar is speaking with leading competitors, company officers, major telecommunications companies, and financial institutions about the possibility of another transaction, merger, acquisition, etc. The Board has directed management to focus on running the satellite business, while the board focuses on servicing Globalstar's debt and future financial plans.

## Competitors

Globalstar's competition comes from other companies in the Mobile Satellite Services (MSS) space and includes Inmarsat PLC and Iridium Communications. These companies offer mobile voice and data communication services that rely on each company's respective satellite networks. Inmarsat operates a large fleet of geostationary satellites that cover the Earth's surface more sufficiently than Globalstar's service capabilities. Inmarsat is also the leading provider of satellite communications in the marine sector. Globalstar and Iridium Communications both offer a network of LEO) satellites, which provide voice and data services to similar consumers.

Other satellite communication companies, such as Garmin and Honeywell Global Tracking, utilize Iridium's satellite network, which increases their amount of network users. Both Inmarsat and Iridium offer handheld mobile devices and products that they market to individuals and businesses. Regional mobile satellite communication companies, such as Thuraya, also offer accessible networks through geostationary satellite systems, which gives consumers an alternative to the services offered by larger companies.

The Mobile Satellite Service industry is tested by external competition from Terrestrial service providers, such as Intelstat Ltd., Eutelstat Communications, and SES S.A, and from aperture terminal companies, such as Hughes and Gilat Satellite Networks. These companies operate large fixed ground terminals that support high bandwidth signals for video and high-speed data customers. Fixed voice and data satellite communications services are effective for instances where multiple users will access the same network in a close geographic area, or in locations where cellular service is not available. Although Fixed-Satellite Service providers have dominated the satellite communication industry in recent history, mobile satellite systems will increasingly gain market share as LEO satellite systems are more advanced because these low flying satellites reduce the distance signals must travel.

Globalstar holds a strong market presence in the MSS industry, achieving \$35.69 million in revenue for the third quarter of 2018. Inmarsat PLC and Iridium Communications brought in significantly more revenue in the same quarter, however, the companies differ immensely in size, their respective growth stages, and the services and products they provide.

The Company's proprietary technology and enhanced communication system provide a unique value to its customers and gives the Company a competitive edge. In 2017, the Company gained "terrestrial authority" when the FCC granted Globalstar the ability to pair its terrestrial broadband network with its satellite system. Globalstar believes that this capability will allow its partners to develop high-density small cell networks which could be more efficient than the conventional commercial spectrum allocations.



The Company also believes that its terrestrial gateways provide advantages over the in-orbit switching systems used by its competitors.

### **Latest Developments**

The Mobile Satellite Services (MSS) industry has seen considerable development over the past decade. Reduced service and product cost has increased demand and usage among governments, businesses, and individuals. Furthermore, the development and implementation of LEO technology in satellites have taken over the industry because of its improved quality and scope of the signal over the previous generation of satellites.

In December 2016, the FCC approved Globalstar's plan for land-based wireless service using the firm's own spectrum. The new plan will allow Globalstar to make more spectrum available to U.S. consumers across the country.

On September 4, 2018, the Company announced the promotion of David Kagan to the position of CEO and James Monroe, III, to Executive Chairman of the Board of Directors. As CEO, Kagan will oversee the Company's satellite related business. In his new role, Monroe will be responsible for all strategic financing efforts and liquidity matters, excluding the senior credit facility, which Kagan will oversee.

### **PEER ANALYSIS**

**Globalstar's** peers are other satellite telecommunications providers primarily serving North America and Europe. As Globalstar seeks to expand into foreign markets, peers serving Asia and Africa also remain relevant. The peers in Table 2 represent premier small to medium size satellite communications companies. This peer group is helpful to gauge the level of Globalstar's debt relative to its size. It also shows Globalstar's favorable return on equity and return on assets, but less than favorable operating margin.





Table 2: Peer Analysis

Company	SpeedCast International Limited	Iridium Communications Inc.	Intelsat	ORBCOMM	APT Satellite Holdings Limited	Peer Average	Globalstar
<b>Ticker Symbol</b>	SDA	IRDM US	I US	ORBC	1045 HK		<b>GSAT US</b>
<b>Exchange</b>	ASX	NASDAQ	NYSE	NASDAQ	HK		<b>NYSE</b>
<b>Market Cap (\$mm)</b>	\$1,002.0	\$2,240.0	\$3,000.0	\$857.3	\$2,997.2	\$1,788.5	<b>\$ 634.5</b>
<b>P/E</b>	92.14	-	-	-	5.53	\$34.46	<b>5.7</b>
<b>Total Debt (\$mm)</b>	\$469.7	\$2,030.0	\$13,790.0	\$246.9	\$1,330.9	\$3,059.3	<b>\$ 488.5</b>
<b>ROE</b>	4.08%	12.81%	N/A	-23.59%	10.30%	10.08%	<b>46.80%</b>
<b>EPS (TTM)</b>	0.05	1.44	-1.94	0.86	0.58	0.18	<b>0.09</b>
<b>ROA</b>	1.29%	4.54%	-1.86%	-10.52	7.25	-0.52	<b>10.20%</b>
<b>Operating Margin</b>	7.72%	12.11%	44.22%	-1.67%	49.69%	19.64%	<b>5.78%</b>
<b>Net Debt/EBITDA</b>	3.44	6.17	8.17	8.3	0.07	6.82	<b>14.74</b>
<b>EV</b>	1,510M	3,470M	15,610M	1,002.6M	3,072.3M	4300.82M	<b>1,040M</b>
<b>EV/EBITDA</b>	12.39	14.63	9.57	303.35	2.98	63.21	<b>36.33</b>

Source: Bloomberg and Yahoo!Finance June 30, 2018

#### Iridium Communications Inc. (IRDM/NASDAQ)

Iridium Communications is a publicly-held satellite communications provider, offering voice and data communication services to corporations, governments, and non-government organizations. Iridium's L-band satellite network consists of 66 operational satellites that provide global coverage to its consumers through an interlinked mesh architecture, which helps route signal traffic through the entire system more efficiently. Iridium is currently allocating large capital expenditures towards its second-generation constellation, Iridium NEXT, which will support higher bandwidth and increase relay speed. The company expects the design, build, and launch of its second-generation constellation to cost around \$3 billion in 2018, which the company will finance through its \$1.8 billion credit facility and internally generated cash flows. Iridium believes that the products and services offered to its commercial customers will contribute the most to the company's long-term growth, as these services are integral for business telephony, e-mail, data transfer, and asset tracking. Iridium's largest customer is the U.S. government, which contributes \$106.1 million or 24% of its total yearly revenue.

#### Intelsat S.A. (I/NYSE)

Intelsat S.A. is a global satellite communications company that provides data and communication infrastructure in the network services, media, and government sectors. The company's satellite network provides connectivity to 99% of populated regions on Earth by pairing its extensive satellite network to its ground terminal system. After years of development, Intelsat is preparing for the launch of its next-generation satellite platform, Intelsat Epic, which will utilize cutting-edge wave frequency technology. The project has proved costly, as Intelsat is currently servicing a total debt balance of over \$13 billion. The company raised approximately \$633 million in the second quarter through equity and convertible bond issuances and lowered its Capex guidance for the rest of the year.

**Orbcomm (ORBC/NASDAQ)**

Orbcomm is a satellite communication and asset tracking provider headquartered in Rochelle Park, New Jersey. Orbcomm specializes in Machine to Machine communications (M2M) and Internet of Things (IoT) applications. Orbcomm also provides data communication services via AT&T, Verizon, T-Mobile, and other premier wireless carriers. Orbcomm resells and utilizes Inmarsat's and Globalstar's satellite array through partnership agreements. The company's quarterly report for the period ended June 30, 2018, saw revenues of \$70.788 million, an improvement from where Orbcomm was a year ago at \$56.957 million. Despite the increase in revenue Orbcomm reported a net loss of \$7.1 million. Of the peer group Globalstar and Orbcomm are closest in size, however, their capital structures are notably different. Orbcomm has total debt of \$246.9 million while Globalstar has a total debt balance of \$488.5 million.

**APT Satellite Holdings Limited (1045 HK/HKSE)**

APT Satellite Holdings Limited, owns and operates four satellites, provides broadcasting and telecommunications, and has the rights and licensing to many Chinese TV channels. The company is headquartered in Hong Kong. APT Satellite claims the ability to cover 75% of the world's population and has plans to launch additional satellites in 2019. APT Satellite's presence in direct to home TV media, broadband services, maritime and in-flight wifi, and data center services contribute to their strong performance. APT Satellite has grossed revenues of \$151.6 million, \$156.7 million, and \$153.7 million in 2015, 2016, and 2017, respectively. APT Satellite reported net income of \$64.28 million for 2017 year ended on December 31.

**Speed Cast International Limited(SDA/AUS)**

SpeedCast International Limited is an Australian network and satellite communications service company, headquartered in Hong Kong. The company provides network connectivity to commercial consumers across multiple industries and offers value-added data and voice solutions tailored to individual businesses. SpeedCast International maintains a similar debt profile to that of Globalstar and achieved \$304.9 million in revenue through the first half of 2018.

**MANAGEMENT PERFORMANCE AND BACKGROUND**

James Monroe, III, Globalstar's longtime Chief Executive Officer (CEO) and President, stepped down from his position as CEO of Globalstar in September 2018 and left a gap in the executive leadership of the Company. However, David Kagan, former Chief Operating Officer, has stepped in and is transitioning to the new position smoothly. Globalstar's top executive team now consists of David Kagan, CEO, L. Barbee Ponder, IV, General Counsel and Vice President of Regulatory Affairs, Rebecca Clary, Vice President and Chief Financial Officer, and Tim Taylor, Vice President of Finance, Business Operations, and Strategy.

**Return on Invested Capital**

Return on invested capital (ROIC) is a financial metric to quantify how well a company turns capital into profits. If management can efficiently produce positive returns utilizing its capital, the company will earn a positive ROIC. Conversely, if management poorly invests capital, they will earn a negative ROIC. As shown in Table 3, GSAT has historically underperformed in this category over the past five years.

**Table 3: Return on Invested Capital**

Company	Ticker	2014	2015	2016	2017	2018 LTM
Iridium	IRDM	3.47%	3.91%	3.92%	2.72%	1.79%
Orbcomm	ORBC	0.30%	1.43%	(0.31%)	(1.00%)	(1.49%)
Intelsat	I	5.43%	5.85%	5.48%	5.32%	5.55%
<i>Peer Average</i>		3.07%	3.73%	3.03%	2.35%	1.95%
<b>Globalstar</b>	<b>GSAT</b>	<b>(8.01%)</b>	<b>(5.45%)</b>	<b>(4.97%)</b>	<b>(4.19%)</b>	<b>(4.55%)</b>

*Source: S&P CAP IQ*

**David Kagan****Chief Executive Officer (57)**

David Kagan became CEO of Globalstar after succeeding James Monroe, III in September 2018. Mr. Kagan had previously worked at Globalstar as President and Chief Operating Officer before briefly leaving the Company in 2017 to become COO of SpeedCast International Limited, a direct competitor of Globalstar. Prior to Globalstar, he worked as President of ITC Global, a global satellite services provider, from August 2014 to September 2015. He also served as the President and CEO of Globe Wireless, a maritime communications services provider, from June 2011 through January 2014. Globe Wireless was acquired by Inmarsat in 2013. With over 20 years of experience in the Satellite Communications industry, Mr. Kagan brings extensive sector knowledge and expertise to the Globalstar Board of Directors. He earned a B.A. in Finance and Marketing at the University of South Florida and received a M.B.A. from Florida Atlantic University.

**L. Barbee Ponder, IV****General Counsel and Vice President of Regulatory Affairs (51)**

Barbee Ponder has held his current position as Globalstar's General Counsel and Vice President of Regulatory Affairs for eight years. Mr. Ponder oversees all regulatory and legal matters concerning Globalstar's FCC approvals as well as foreign government approvals to operate satellite communication business internationally. Prior to joining Globalstar, Mr. Ponder acted as Chief Regulatory Counsel at BellSouth Corporation, a large telecommunications company owned by AT&T. At BellSouth, Mr. Ponder focused on gaining FCC approvals for the company's operations and business. Before BellSouth, he practiced commercial litigation at Jones Walker Law firm in New Orleans. Mr. Ponder earned his B.S.M. from Tulane University's A.B. Freeman School of Business before earning a law degree at Emory University's School of Law.

**Tim Taylor****Vice President of Finance, Business Operations & Strategy (35)**

Tim Taylor is currently serving Globalstar as Vice President of Finance, Business Operations & Strategy. Mr. Taylor also works as Vice President of Thermo Capital Partners, which is the majority shareholder of Globalstar. At Globalstar, Mr. Taylor oversees the Company's satellite services and operations and assists the Company with gaining spectrum authority from the Federal Communications Commission (FCC) and other international regulatory agencies. Prior to working at Globalstar, he worked as an associate at Brown Brothers Harriman doing Mergers and Acquisitions and Capital Raising work in their Telecommunications coverage group. Mr. Taylor graduated from the University of Virginia with a degree in Systems Engineering.

**Rebecca S. Clary****Vice President & Chief Financial Officer (39)**

Rebecca Clary currently serves Globalstar as the Company's Vice President and Chief Financial Officer (CFO). Ms. Clary joined Globalstar in 2010 after working in senior positions at PricewaterhouseCoopers in its audit services division. From June 2011 through July 2014, she served as Globalstar's Corporate Controller and Chief Accounting Officer. As CFO, Ms. Clary oversees the Company's accounting and financial reporting operations. She holds the title of Certified Public Accountant and has a B.S and M.S. in Accounting from Louisiana State University.

**Compensation**

Globalstar utilizes a performance-based compensation structure with the goal of incentivizing executives to maximize shareholder value. Company executives receive a base salary, a discretionary bonus, and the possibility of earning equity-based compensation, as stated in the amended 2006 Equity Incentive Plan. Executive bonuses are determined by the Compensation Committee, and the amount is based on the Company's adjusted earnings before interest, tax, depreciation, and amortization for the reporting period. Employees may receive the bonus in cash or Globalstar common stock. The Company achieved an adjusted EBITDA of \$32.2 million in 2017, which resulted in a total bonus amount of \$1.2 million. Adjustments to the bonus amount are made for each 1% change in adjusted EBITDA, which can result in annual increases or decreases to the bonus pool.

**SHAREHOLDER ANALYSIS**

As of November 9, 2018, **Globalstar Inc.**, had a market capitalization of \$428 million. Globalstar Inc. currently has 1.26 billion basic shares outstanding and 1.44 billion diluted shares outstanding. The Company has not issued any shares of preferred stock. James Monroe, III, the Chairman of the Board, is the largest shareholder, owning 53.11% of Globalstar worth \$228 million. The next largest insider shareholder is Chief Executive Officer David Kagan, with 0.31% of total shares outstanding, or a little under 3.8 million shares. Monroe acquired most of his shares from his initial investment through Thermo Capital Partners in 2003. Kagan acquired his shares predominantly through executive stock compensation bonuses.



## Investor Profile

Globalstar’s primary investors can be broken down into three categories: investment managers, brokerage firms, and strategic entities or individuals (see Tables 4 - 6). Other than James Monroe, III, Globalstar’s largest investor group is investment managers, owning 32.02% of shares outstanding. Mudrick Capital Management, Vanguard Group, and Warlander Asset Management are a few examples of large institutional stockholders who own Globalstar. Hedge funds also make up a large portion of the investor base. Currently, 67 hedge funds account for 17.85% of Globalstar’s shares outstanding. Investment managers consider Globalstar a growth stock, as five “aggressive growth” portfolios contain a total of 2.27% of shares outstanding and 44 “core growth” portfolios contain a total of .75% of shares outstanding.

**Table 4: Top-ten External Institutional Holders**

Name	Shares	% of Total Shares Held
Mudrick Capital Management LP	70,689,669	5.6
Vanguard Group Inc	58,662,839	4.64
Warlander Asset Management LP	35,500,000	2.81
Steelhead Partners LLC	30,577,053	2.42
HHR Asset Management, LLC	28,553,778	2.26
Beck, Mack & Oliver LLC	21,646,540	1.71
Columbia Pacific Advisors, LLC	9,993,735	0.86
Goldman, Sachs & Co.	9,988,816	0.79
Mason Capital Management LLC	9,905,537	0.78
Millennium Management LLC	9,330,331	0.74

*Source: Morningstar September 25, 2018*

**Table 5: Investor Types**

Investor Type	Investors	% O/S	# of Shares	Val (\$MM)
Investment Managers	271	32.02	404,417,973	203.59
Brokerage Firms	25	1.42	17,963,662	8.81
Strategic Entities (Individuals)	10	54.51	688,426,687	421.55

*Source: Thompson One September 25, 2018*

**Table 6: Investor Style**

Investment Style	Investors	% O/S	# of Shares	Value (\$MM)
Hedge Fund	67	17.85	225,446,165	110.47
Index	28	6.79	85,750,366	42.01
Aggres. Gr.	5	2.27	28,641,343	14.03
GARP	17	2.25	28,444,456	13.93
Broker-Dealer	25	1.42	17,963,662	8.81
Core Growth	44	0.75	9,472,242	4.7
Core Value	24	0.2	2,514,171	1.23
Income Value	4	0.13	1,675,117	0.82
Deep Value	6	0.03	410,854	0.21
Growth	12	0.01	83,984	0.11

*Source: Thompson One September 25, 2018*

## **RISK ANALYSIS AND INVESTMENT CAVEATS**

**Globalstar, Inc.** faces several financial and operational risks. The majority of its financial risks stem from their large amount of debt and frequent need for capital. These financing risks are somewhat unique to Globalstar, as it has a higher level of leverage than its competitors. The Company's operational risks are competitor, technology, intellectual property, environmental, capital requirement and supply risk. These operational risks are common to many companies in the Mobile Satellite Services industry.

### **Financial Risks**

#### **Capital Structure Risk**

As of the third quarter of 2018, Globalstar is servicing \$87.7 million in short-term debt and it maintains a long-term debt balance of \$407.6 million. Globalstar will need to refinance or raise additional capital over the next 12 months due to required principal payments in December 2018 and June 2019 under its credit facility agreement. According to the Company's recent 10-Q filing, the Company has not yet found a lender. This prolonged search for sources of credit may be due to Globalstar's troubled liquidity history and its multiple refinancing of its debt. Given the capital-intensive nature of the satellite communications industry, it is unclear how Globalstar will be able to maintain its capital spending while covering its future credit obligations.

The Company has a limited ability to take on additional debt and is struggling to generate sustainable levels of unlevered free cash flow to pay-off its debt load. Globalstar's core business has recently generated about \$40 million earnings before interest, tax, depreciation and amortization annually, however, the Company must pay roughly \$100 million per year in interest payments on its current debt obligations. This deficit leaves Globalstar with the burden to generate roughly \$60 million in new equity funding or subordinated debt to finance the Company's deficit. The Company's five-year outlook is categorized by substantial debt repayment and a need to increase its cash flow from operations.



Given the current size of its credit liabilities, investors should be concerned about the Company's ability to grow its service capabilities and customer contracts until the Company's long-term debt matures.

### **Credit Breakdown**

Globalstar entered into its credit facility agreement with a syndicate of bank lenders, including BNP Paribas, Société Générale, Natixis, Crédit Agricole, and Crédit Industrial et Commercial. The French export credit agency Bpifrance Assurance Export S.A.S. has guaranteed 95% of Globalstar's obligations under the facility. The facility holds a carrying value, which is the principal amount net of deferred financing costs and discounts to the loan amounts at issuance, of roughly \$400 million. The facility has been amended three times since Globalstar entered into the agreement, with modified indentures to ensure that senior lenders are repaid. These covenants include a capital expenditure cap of \$15 million a year, a minimum liquidity balance of \$4.0 million that the Company must maintain until maturity, and a maximum net debt to EBITDA ratio of 5:1 until December 31, 2018. Globalstar must also have a minimum interest coverage ratio of 3.50:1 for the duration of 2018, which will increase semi-annually until the ratio equals 5:1. The agreement limits Globalstar from making certain investments, capital expenditures, and transactions, and prevents the Company from taking on additional debt. At the end of 2017, the Company was in compliance with its obligations under the facility, however, failure to uphold its financial position will accelerate the repayment schedule.

Prior to the end of the third quarter of 2018, the facility had a floating rate of LIBOR plus 3.25%. The rate will increase by an additional 0.5% each year until the facility matures, with an interest rate cap of 5.50%. To comply with the covenants, the Company was given the ability to create certain funds called Equity Cure Contributions using proceeds from the issuance of common stock or subordinated debt to meet the financial requirements of the facility. In the event of default, first-lien creditors are secured by almost all of Globalstar's and its subsidiaries assets, including patents, trademarks, 100% equity in the Company's domestic enterprises, and 65% of the equity in certain foreign subsidiaries.

### **Thermo Capital Partners Loan**

Globalstar is also heavily financed through its loan agreement with Thermo Capital Partners LLC, which currently holds a carrying value of \$92.48 million. Similar to the credit facility, the Thermo loan was restated in July of 2013 and is subordinate to the Credit Facility in terms of repayment. The loan carries an interest of 12% per annum with Payment-In Kind interest (PIK), which is a financial instrument that allows the borrower to delay interest payments until the loan matures. At the end of the third quarter of 2018, Globalstar has accrued \$72.6 million in interest from the loan agreement.

**8.00% Convertible Senior Notes**

In 2013, Globalstar issued 8.00% notes that are convertible into shares of common stock at an adjusted price of \$0.73. The convertible notes are senior unsecured debt obligations and mature on April 1st, 2028. Subject to certain conditions, Globalstar can redeem the 2013 notes with the approval of the majority lenders under its credit facility. At the end of the second quarter, 2018, holders of the notes had converted \$55.4 million in principal amount to roughly 98.5 million in shares of Globalstar common stock.

**Operational Risks****Environmental Risk**

Globalstar's service relies on a network of ground stations and satellites which are all susceptible to damage and failures due to catastrophic events, such as hurricanes, or solar flares, and other anomalies associated with space debris. Globalstar provides service to North America and Europe from its Network Operations Control Centers in France, California, and Louisiana. This redundancy mitigates the risk of control loss, however, if Globalstar experienced failures at a control center or ground station, the ensuing system shutdown can have an adverse impact on service and Globalstar's business. While the Company acknowledges its coverage may be limited in some areas, Globalstar has never lost the ability to provide service for an extended period. One example of the environmental risk Globalstar faces was shown when the Company launched its second-generation fleet early upon learning that its first generation aged prematurely.

**Technology Risk**

The satellite telecommunications industry is a relatively young industry that is reactive to advances in communications equipment, space technology, and satellite technology. Advancements can be made quickly, and once a satellite is deployed there are limited adjustments that can be made. The equipment will always operate within the same hardware limitations from launch. Ground stations are also susceptible to inherent technological risks. As ground stations age, replacement parts for their various components and hardware are more difficult to find in the event of a failure. Globalstar is a smaller company operating a complex system, which contains custom solutions that may be difficult to repair.

Globalstar purchases an insurance policy from BPIFAE (formerly Coface) on the hardware of each satellite, which provides protection for malfunctions for up to six months after launch. Satellites' hostile environment and exposure to solar flares, radiation, and orbital decay contribute to a reduction in the useful life of a satellite. Globalstar has reported that the majority of its first generation of satellites failed in orbit or were retired. The Company is optimistic that recent advancements in satellite design, manufacturing, and technology will contribute towards a longer useful life of fifteen years.

Despite this optimism, it is possible that Globalstar's second generation of LEO satellites will fall short of the Company's expectations. If the satellites fail or need to retire prematurely, Globalstar's business and service may be negatively impacted.





Without consistent service, customers may switch to a competitor's satellite phone service, government contracts could be lost, and the Company's reputation may be damaged. Globalstar is not immune to a single point of failure that brings down its service, however, the Company uses system redundancies and backup plans to mitigate risk.

**Capital Requirement Risk**

Replacing satellites at the end of their useful life requires substantial capital expenditures. As satellites decay, become inoperable, or fail prematurely, Globalstar will need to launch new satellites prior to a loss of coverage to avoid disruption in service. If Globalstar does not have the required capital on hand and the Company is unable to finance new satellites, Globalstar may face a disruption of service and business. Major technological advancements in the satellite field can also require higher capital expenditures as Globalstar works to maintain a competitive edge. If Globalstar falls behind on its research, satellite fleet, or service network it could lose customers, licenses, and the ability to provide service.

**Intellectual Property Risk**

In the satellite telecommunication industry, the ability to maintain and obtain intellectual property can rapidly change the competitive landscape. Globalstar has recently obtained new spectrum allocation through the Federal Communications Commission (FCC), however, allocations are subject to 15-year limits. Globalstar's current spectrum licenses are up for renewal in 2024. In 2016 the FCC allowed Globalstar to begin deployment of an earth-based low-power broadband network. This new allocation has the potential to allow Globalstar to develop better machine to machine communications and remain competitive within the industry. The FCC rules are designed around creating a fair and competitive atmosphere, which often leads to intellectual property risk. The Company is also risk sensitive to other company's proprietary knowledge among competitors. If another satellite communication provider obtains a patent for technology or software that enhances its service, Globalstar could lose valuable subscribers.

**Competitor Risk**

Globalstar competes with numerous Mobile Satellite Service (MSS) operators in its current markets in Europe and North America. Globalstar will also need to compete with MSS operators in foreign and emerging markets around the globe as the Company expands. Competitors have marketable products, intellectual property, and, in some cases, better name recognition and resources. The industry may have high barriers to entry, however, the space remains highly competitive and numerous companies are attempting to attract and retain the same customers. These products and services are price sensitive to the excess supply of satellite communications companies. Aggressive pricing strategy, marketing, and branding have the potential to adversely affect Globalstar. If competition can squeeze Globalstar out of subscribers, profit margins, or intellectual property, Globalstar's growth may be stifled.

**Supply Risk**

Globalstar reports that it has a limited quantity of Duplex handsets in its inventory. Qualcomm was the sole manufacturer before Globalstar canceled their contract in 2013. If Globalstar is unable to continue sourcing Duplex handsets through its current contracts, finding alternatives and operating its business would be difficult.



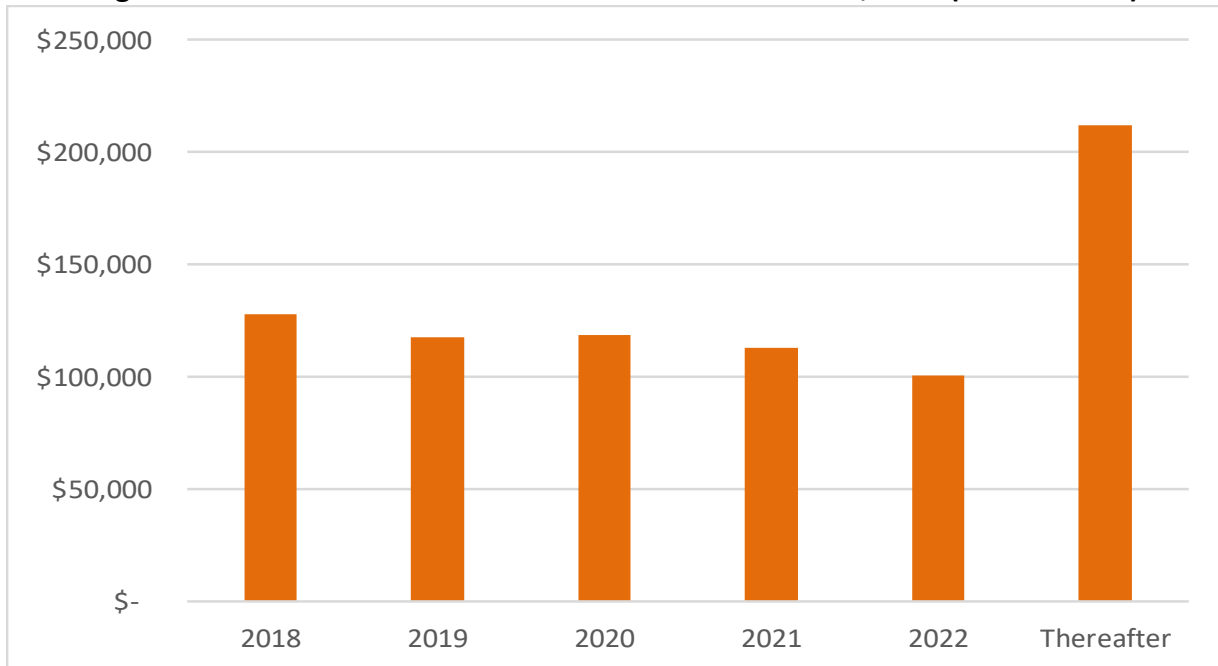
Duplex service accounts for nearly one-third of Globalstar’s revenue, and it is critical for the Company to continue selling Duplex at a cost consumers find attractive.

**FINANCIAL PERFORMANCE AND PROJECTIONS**

We decided the most reliable way to forecast service revenue in our model was to multiply average monthly subscribers for each product (Duplex, Simplex, SPOT, and IGO) by average monthly revenue per unit (ARPU). We forecasted subscriber growth and ARPU going forward by using historical growth rates of each. Assumptions for long term subscriber growth rates for Duplex, SPOT, Simplex and IGO are (.75%), 3.5%, 3.0%, and (1.0%), respectively. Assumptions for long term ARPU growth for Duplex, SPOT, Simplex and IGO are 2.0%, 3.0%, 1.5% and 1.5%, respectively. We found that the most reliable way to forecast equipment revenue was to simply use historical growth rates. To forecast operating expenses such as cost of services and marketing, general, and administrative we left them in line with historical common size amounts. Going forward, we calculated cost of services as 35.2% of service revenues and cost of equipment sales as 73.9% of equipment revenue. We decided to hold these percentages constant in efforts to be conservative, however, with continued growth of the Company’s core business these common size amounts should decrease.

To meet interest payments on debt, we assume refinancing of debt and dilution of equity holders going forward. To finance **Globalstar’s** operating loss, we anticipated borrowings on the facility agreement through 2022. Globalstar’s ability to service its upcoming debt as it becomes due is a major element and assumption of the model. The possibility of default remains, and Globalstar’s ability to continue operations relies on raising additional capital. Timing is critical and Globalstar needs to act quickly to resolve its debt burden (see Figure 7).

**Figure 7: Debt Schedule and Due Dates as of December 31, 2017 (in thousands)**





## SITE VISIT

Our team traveled to **Globalstar's** headquarters in Covington, Louisiana on October 5, 2018. We had the pleasure to meet with Tim Taylor, Vice President of Finance, and Shiv Thukral, Director of Finance and Analytics. Shiv Thukral, a Tulane A.B. Freeman and Burkenroad Reports alum, greeted us and provided us with an in-depth update on where the Company stands. Mr. Thukral reported a healthy core satellite business with a heightened optimism surrounding Globalstar's spectrum assets and possible monetization nearing. The tentative time horizon for Globalstar's 3GPP spectrum monetization is dependent on several factors, primarily government approval, and would possibly occur in mid-2019.

When asked about the recent litigation and failed merger, Mr. Thukral reported a possible overhang on the stock, but that the Company would move quickly to resolve the dispute and continue to focus on business. Tim Taylor gave us a comprehensive outlook for the financial needs of Globalstar. We gained a clearer understanding of the credit facility agreement as he outlined the deal; five French banks loaned Globalstar \$580 million in 2013, the French government guaranteed 95% of the debt, and the agreement has been restructured in 2011, 2013, 2014, 2015, and 2017. Globalstar needs to pay back approximately \$100 million per year and is limited to \$15 million per year in capital expenditures.

We discussed Globalstar's share price and its relationship to the NYSE: American Exchange, learning that Globalstar is the second largest company by market cap. The American Exchange also provides a relaxed environment for the stock to trade below \$1 per share without delisting. While a low price may make equity raises unattractive, it appears that, if needed, subordinated debt might be more attractive to the Company.

Operationally, Globalstar has reported remarkable progress in that the Company has been able to increase the average revenue per unit while experiencing a decreasing churn rate. This has been accomplished through several cost and efficiency control tactics, including a significant increase in focus on customer relations. Our meeting also covered the effects of Washington's most recent trade policies, which are expected to be minimal, even for suppliers based in China.



*Site Visit Photo*

## **INDEPENDENT OUTSIDE RESEARCH**

Contacting outside professionals relevant to **Globalstar** and its core satellite business was one of our team's highest priorities given the highly speculative nature of the Company's inherent value. Our team focused our research efforts on the core fundamentals of Globalstar while keeping the Company's new spectrum in mind.

### **A Familiar Perspective**

One of our contacts graduated from Tulane University in 2017 with a dual degree in Finance and Management. During his junior year, our contact followed Globalstar as a Burkenroad analyst, and his group assigned a target price of \$0.75 to the Company's stock. After graduating from Tulane, our contact began working at SpaceX as a Financial Analyst. To begin his employment, our source helped oversee the financial well-being of the engineering, supply chain, and production departments at SpaceX. Today, our source's work is focused primarily around capital markets research.

We began our conversation by discussing the operational viability of Globalstar's core business model. Our source stated that Globalstar's competitive advantage comes from its products and services within the emergency services space. Our contact discussed in-depth the Company's second-generation Low Earth Orbit (LEO) satellite array, and how duplex and SPOT tracking is the primary utility of the satellites. Because of the large amount of satellites required to operate a LEO constellation, these systems require significant software upgrades and up-keep expenses. The Analyst confirmed the Company's expectation that the second-generation satellites have a useful life of 15 years.



However, our source warned that as the larger companies, such as Iridium Communications, expand their fleets and coverage zones, Globalstar might fall to the wayside due to their inability to match these companies R&D and capital expenditures.

Our contact provided reassurance to Globalstar's liquidity position and financial outlook. Due to Thermo Capital's large ownership stake in the Company, the analyst stated that the Company should be able continue its operations and service its short-term debt obligations. When we discussed the best way to value Globalstar, our contact stated that the position of equity holders relies fully on the Company's spectrum asset. Until the Company can secure the 3GPP spectrum certification and begin monetizing the spectrum asset, the public will not be able to accurately gauge Globalstar's true value moving forward.

### **Industry Expert Guidance**

We contacted a Liquid Propulsion Systems Engineer at the NASA Johnson Space Center, to provide an additional perspective. The contact confirmed that a ten to fifteen-year life is nominal for a low earth orbit satellite. For an additional perspective and an interesting topic, The contact directed our group to investigate Space X's Starlink project. At an initial glance Starlink appears to be a behemoth of a project for Space X. The project's goal to launch nearly 12,000 LEO satellites by the mid 2020's is as ambitious as it is costly. Space X also has the unique ability to control all aspects of the launch and operations. This volume of satellites could truly provide global coverage and could revolutionize the satellite communications industry. Space X's future is uncertain; however, Space X is a quiet, growing force entering the industry.

As the industry develops and matures it appears that companies, like Space X, will attempt to operate on an astronomical scale. Globalstar's spectrum remains its hope to be competitive in an industry that is introducing fresh and giant organizations.



# ANOTHER WAY TO LOOK AT IT

## ALTMAN Z-SCORE

The Altman Z-Score Analysis is a way of determining the likelihood of bankruptcy for a company over the coming years. A Z-Score Analysis was first applied to public manufacturing companies; however, it can be applied to any public company as a measure of insolvency. A company with a Z-Score below 1.8 is considered to have a very high chance of bankruptcy. A company with a score between 1.8 and 2.7 is considered to have a high chance of defaulting on its debt. A company with a score between 2.7 and 3.0 is considered to have a moderate chance of insolvency, and a company with a score above 3.0 could be considered a low risk of default.

### Calculation

Z-Score Analysis is based upon a Linear Discriminant Model, which attempts to divide borrowers into classes of low and high default risk. The following equation and terms are used to calculate a company's Z-Score:

$$\text{Z-Score} = 1.2(X_1) + 1.4(X_2) + 3.3(X_3) + .6(X_4) + 1(X_5)$$

Whereas:

$X_1$  = Working Capital/Total Assets

$X_2$  = Retained Earnings/Total Assets

$X_3$  = EBIT/Total Assets

$X_4$  = Market Value of Equity/Book Value of Total Liabilities

$X_5$  = Sales/Total Assets

Considering that **Globalstar's** Z-Score score has consistently been between -2.0 and -0.25 over the past 10 years, it is safe to say that the Company is at risk of default according to the Z-Score Method (see Table 7).

**Table 7: Z-Score Analysis**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Z Score</b>	-2.05	-1.57	-0.75	-1.05	-1.21
<b>Safety Rating</b>	Distressed Zone	Distressed Zone	Distressed Zone	Distressed Zone	Distressed Zone

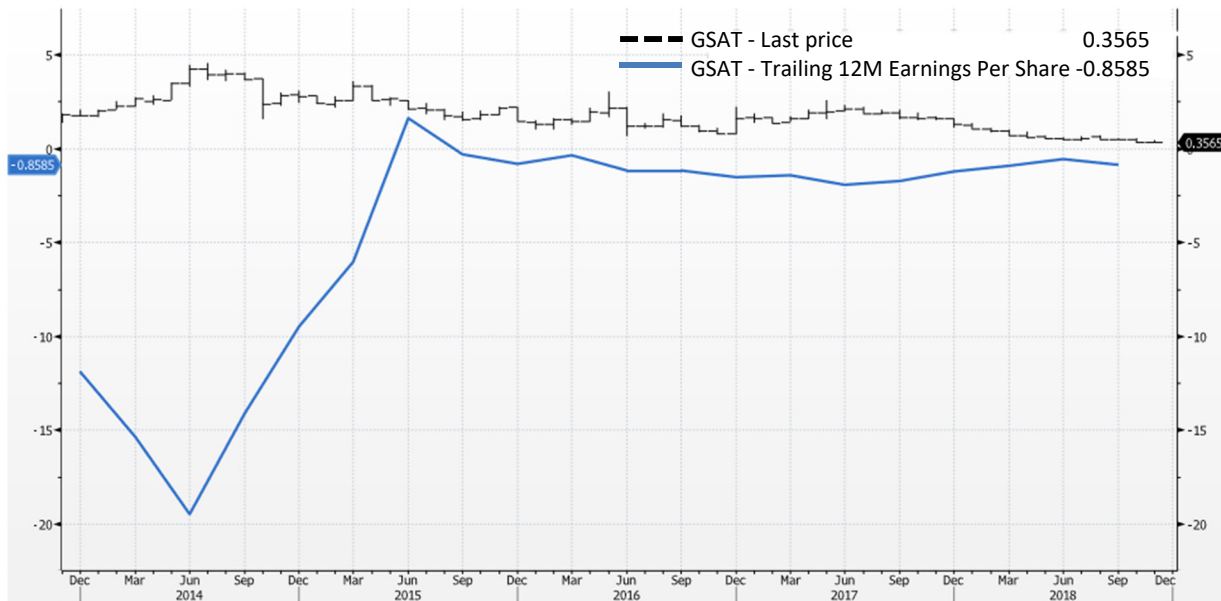


### PETER LYNCH EARNINGS MULTIPLE VALUATION

In his book *One Up on Wall Street*, Peter Lynch recommends a method of deciding whether to invest in a certain stock. His method involves using a historical line chart to compare a stock’s actual price to a price equal to 15 times the trailing 12-month earnings per share. This theoretical price represents a threshold for whether or not to buy a stock. If the stock’s actual price is below the theoretical price, he would buy the stock. If the stock price falls below the theoretical price, he would sell the stock.

Figure 8 represents the trailing 12-month earnings per share and stock price for **Globalstar**. Since Globalstar is currently trading at \$0.34 and has a trailing 12-month earnings per share of (\$0.85), Lynch would suggest selling this stock.

**Figure 8: GSAT Stock Price vs. 15x P/E Ratio**



Source: Bloomberg



# WWBD?

## WHAT WOULD BEN (GRAHAM) DO?



Benjamin Graham is widely regarded as the “father of value-investing” and was a mentor to Warren Buffet. His investment philosophy applied fundamental analysis to find stable, undervalued stocks with strong upside potential. Graham would evaluate an equity based off eight specific requirements:

1. An Earnings to Price Yield of 2X the Yield on the 10-year Treasury.
2. A P/E Ratio Down to 1/2 of the stocks Highest in 5 years.
3. A Dividend Yield of 1/2 the Yield of the 10-year Treasury.
4. A stock price less than 1.5 times the book value per share.
5. Total Debt less than Book Value of Debt.
6. Current Ratio of Two or More
7. Earnings growth of 7% or higher over the past five years.
8. Stability in Growth of Earnings

In our analysis we found that **Globalstar** passes four of Graham’s eight hurdles:

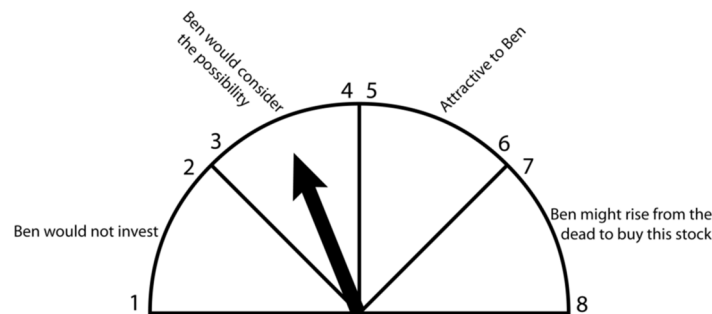
- #1. The Company’s earnings yield is 13.71% which is over 2x the 10-year Treasury
- #2. The Company’s highest P/E ratio in the last 5 years was 24.5x in 2015. The current price-to-earnings multiple of Globalstar is 7.3x, which is less than half 24.5x
- #4. The Company’s stock price is \$0.34, and its book value per share is \$0.31. The stock price is less than 1.5x its book value per share
- #6. The Company’s current ratio is 6.5.

Globalstar fails four of Graham’s eight hurdles:

- #3. The Company does not issue dividends
- #5. The Company’s total interest-bearing debt is more than its Book Value of Debt
- #7. The Company’s earnings per share (EPS) has not experienced any sustained growth.
- #8. The Company’s EPS has been erratic and inconsistent.

Because Globalstar passes four hurdles and is high risk, Graham would consider the possibility of investing, but would probably not invest (see Figure 9).

**Figure 9: Ben Graham Dial**







GLOBALSTAR (NYSE: GSAT)

Ben Graham Analysis

Hurdle # 1: An Earnings to Price Yield of 2X the Yield on 10 Year Treasury			
Earnings per share (ttm)	\$	0.05	Price: \$ 0.35
Earnings to Price Yield			13.71%
10 Year Treasury (2X)			6.38%
Yes			
Hurdle # 2: A P/E Ratio Down to 1/2 of the Stocks Highest in 5 Yrs			
P/E ratio as of	12/31/13		(1.8)
P/E ratio as of	12/31/14		(5.6)
P/E ratio as of	12/31/15		24.5
P/E ratio as of	12/31/16		(12.7)
P/E ratio as of	12/31/17		(17.2)
Current P/E Ratio			7.3
yes			
Hurdle # 3: A Dividend Yield of 1/2 the Yield on 10 Year Treasury			
Dividends per share (ttm)	\$	-	Price: \$ 0.35
Dividend Yield			0.00%
1/2 Yield on 10 Year Treasury			1.59%
No			
Hurdle # 4: A Stock Price less than 1.5 BV			
Stock Price			\$ 0.35
Book Value per share as of	11/9/18		\$ 0.31
150% of book Value per share as of	11/9/18		\$ 0.47
Yes			
Hurdle # 5: Total Debt less than Book Value			
Interest-bearing debt as of	11/9/18		\$ 499,797
Book value as of	11/9/18		\$ 392,100
No			
Hurdle # 6: Current Ratio of Two or More			
Current assets as of	11/9/18		\$ 1,057,821
Current liabilities as of	11/9/18		\$ 162,549
Current ratio as of	11/9/18		6.5
Yes			
Hurdle # 7: Earnings Growth of 7% or Higher over past 5 years			
EPS for year ended	12/31/17		\$ (0.08)
EPS for year ended	12/31/16		\$ (0.12)
EPS for year ended	12/31/15		\$ 0.06
EPS for year ended	12/31/14		\$ (0.50)
EPS for year ended	12/31/13		\$ (0.96)
No			
Hurdle # 8: Stability in Growth of Earnings			
EPS for year ended	12/31/17	\$	(0.08)
EPS for year ended	12/31/16	\$	(0.12) 63%
EPS for year ended	12/31/15	\$	0.06 -147%
EPS for year ended	12/31/14	\$	(0.50) -943%
EPS for year ended	12/31/13	\$	(0.96) 94%
No			

Stock price data as of November 9, 2018



GLOBALSTAR (NYSE: GSAT)  
Quarterly and Annual Earnings

In thousands

For the period ended	2015 A	2016 A	2017 A	2018 E				2018 E	2019 E				2019 E
				31-Mar-18 A	30-Jun-18 A	30-Sep-18 A	31-Dec-18 E		31-Mar-19 E	30-Jun-19 E	30-Sep-19 E	31-Dec-19 E	
<b>Revenues</b>													
Service revenue	\$ 74,124	\$ 83,069	\$ 98,473	\$ 26,010	\$ 27,995	\$ 29,898	\$ 30,006	\$ 113,909	\$ 30,805	\$ 31,629	\$ 32,480	\$ 33,358	\$ 128,272
Subscriber equipment sales	16,366	13,792	14,187	2,739	5,731	5,794	5,441	19,705	5,779	5,716	5,859	6,006	23,159
<b>Total revenue</b>	<b>90,490</b>	<b>96,861</b>	<b>112,660</b>	<b>28,749</b>	<b>33,726</b>	<b>35,692</b>	<b>35,447</b>	<b>133,614</b>	<b>36,382</b>	<b>37,345</b>	<b>38,339</b>	<b>39,364</b>	<b>151,430</b>
<b>Operating expenses</b>													
Costs of services	30,615	31,908	37,022	9,029	9,526	9,429	10,570	38,554	10,851	11,141	11,441	11,750	45,183
Cost of subscriber equipment sales	11,814	9,907	9,944	2,172	4,170	4,426	4,019	14,787	4,119	4,222	4,328	4,436	17,104
Reduction in the value of equipment			843										
Reduction in the value of assets		350	17,040										
Marketing, general, and administrative	37,418	40,982	39,099	11,275	15,944	15,061	13,652	55,932	14,012	14,383	14,766	15,161	58,322
Depreciation and amortization	77,247	77,390	77,498	19,231	22,616	24,738	22,153	88,738	22,222	22,291	22,360	22,429	89,301
<b>Total operating expenses</b>	<b>157,094</b>	<b>160,537</b>	<b>181,446</b>	<b>41,707</b>	<b>31,778</b>	<b>53,654</b>	<b>50,393</b>	<b>177,532</b>	<b>51,204</b>	<b>52,037</b>	<b>52,894</b>	<b>53,775</b>	<b>209,910</b>
<b>Operating income (loss)</b>	<b>(66,604)</b>	<b>(63,676)</b>	<b>(68,786)</b>	<b>(12,958)</b>	<b>1,948</b>	<b>(17,962)</b>	<b>(14,946)</b>	<b>(43,918)</b>	<b>(14,822)</b>	<b>(14,692)</b>	<b>(14,555)</b>	<b>(14,412)</b>	<b>(58,480)</b>
<b>Other income (expense):</b>													
Loss on extinguishment of debt	(2,254)		(6,306)										
Loss on future equity issuance	(6,663)	2,400	2,670										
Interest expense	(35,854)	(35,952)	(34,771)	(7,353)	(10,305)	(13,358)	(7,949)	(38,965)	(7,671)	(7,557)	(7,443)	(7,435)	(30,106)
Interest rate derivative gain (loss)	181,860	(41,531)	21,182	108,944	(2,059)	39,059		145,944					
Gain on legal settlement					6,779			6,779					
Other	3,229	(430)	(2,873)	(662)	(3,351)	1,331		(2,682)					
<b>Total other income (expense)</b>	<b>140,318</b>	<b>(75,513)</b>	<b>(20,098)</b>	<b>100,929</b>	<b>(8,936)</b>	<b>27,032</b>	<b>(7,949)</b>	<b>111,076</b>	<b>(7,671)</b>	<b>(7,557)</b>	<b>(7,443)</b>	<b>(7,435)</b>	<b>(30,106)</b>
<b>Income (loss) before income taxes</b>	<b>73,714</b>	<b>(139,189)</b>	<b>(88,884)</b>	<b>87,971</b>	<b>(6,988)</b>	<b>9,070</b>	<b>(22,894)</b>	<b>67,159</b>	<b>(22,493)</b>	<b>(22,249)</b>	<b>(21,998)</b>	<b>(21,847)</b>	<b>(88,586)</b>
Income tax expense (benefit)	1,392	(6,543)	190	41	24	51	5	121	5	5	5	5	19
<b>Net income (loss)</b>	<b>\$ 72,322</b>	<b>\$ (132,646)</b>	<b>\$ (89,074)</b>	<b>\$ 87,930</b>	<b>\$ (7,012)</b>	<b>\$ 9,019</b>	<b>\$ (22,899)</b>	<b>\$ 67,038</b>	<b>\$ (22,497)</b>	<b>\$ (22,253)</b>	<b>\$ (22,003)</b>	<b>\$ (21,851)</b>	<b>\$ (88,605)</b>
<b>Net income (loss) per common share:</b>													
Basic	\$ 0.07	\$ (0.12)	\$ (0.08)	\$ 0.07	\$ (0.01)	\$ 0.01	\$ (0.02)	\$ 0.06	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.08)
Non-recurring charges	\$ 0.11	\$ (0.02)	\$ 0.00	\$ 0.05	\$ 0.01								
Basic net of non-recurring	\$ (0.04)	\$ (0.14)	\$ (0.08)	\$ 0.12	\$ (0.00)	\$ 0.01	\$ (0.02)	\$ 0.06	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.08)
<b>Diluted</b>													
Basic	\$ 0.07	\$ (0.12)	\$ (0.08)	\$ 0.06	\$ (0.01)	\$ 0.01	\$ (0.02)	\$ 0.05	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.08)
Non-recurring charges	\$ 0.09	\$ (0.02)	\$ 0.00	\$ 0.05	\$ 0.01								
Diluted net of non-recurring	\$ (0.02)	\$ (0.14)	\$ (0.08)	\$ 0.11	\$ (0.00)	\$ 0.01	\$ (0.02)	\$ 0.05	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.08)
<b>Weighted average shares outstanding:</b>													
Basic	1,020,149	1,064,443	1,166,581	1,262,336	1,263,372	1,264,516	1,072,163	1,073,931	1,075,656	1,078,203	1,080,259	1,082,484	1,083,474
Diluted	1,230,394	1,064,443	1,166,581	1,437,328	1,263,372	1,427,800	1,072,163	1,236,931	1,075,656	1,078,203	1,080,259	1,082,484	1,083,474



GLOBALSTAR (NYSE: GSAT)

Quarterly and Annual Earnings

As percentage of revenue

SELECTED COMMON-SIZE AMOUNTS	2015 A	2016 A	2017 A	2018 E				2018 E	2019 E				2019 E
				31-Mar-18 A	30-Jun-18 A	30-Sep-18 A	31-Dec-18 E		31-Mar-19 E	30-Jun-19 E	30-Sep-19 E	31-Dec-19 E	
Service revenue	81.91%	85.76%	87.41%	90.47%	83.01%	83.77%	84.65%	85.25%	84.67%	84.69%	84.72%	84.74%	84.71%
Subscriber equipment sales	18.09%	14.24%	12.59%	9.53%	16.99%	16.23%	15.35%	14.75%	15.33%	15.31%	15.28%	15.26%	15.29%
Depreciation and amortization	104.21%	93.16%	78.70%	73.94%	80.79%	82.74%	73.83%	77.90%	72.14%	70.48%	68.84%	67.24%	69.62%
Costs of services as % of service revenue	41.30%	38.41%	37.60%	34.71%	34.03%	35.22%	35.22%	35.22%	35.22%	35.22%	35.22%	35.22%	35.22%
Cost of subscriber equipment sales as % of equipment revenue	72.19%	71.83%	70.09%	79.30%	72.76%	73.86%	73.86%	73.86%	73.86%	73.86%	73.86%	73.86%	73.86%
Marketing, general, and administrative as % of total revenue	41.35%	42.31%	34.71%	39.22%	47.28%	38.51%	38.51%	38.51%	38.51%	38.51%	38.51%	38.51%	38.51%
Total operating expenses	211.93%	193.26%	184.26%	160.35%	113.51%	179.46%	167.94%	155.85%	166.22%	164.52%	162.85%	161.21%	163.65%
Operating income (loss)	-89.85%	-76.65%	-69.85%	-49.82%	6.96%	-60.08%	-49.81%	-38.55%	-48.11%	-46.45%	-44.81%	-43.20%	-45.59%
Other income (expense):													
Total other income (expense)	189.30%	-90.90%	-20.41%	388.04%	-31.92%	90.41%	-26.49%	97.51%	-24.90%	-23.89%	-22.92%	-22.29%	-23.47%
Income (loss) before income taxes	99.45%	-167.56%	-90.26%	338.22%	-24.96%	30.34%	-76.30%	58.96%	-73.02%	-70.34%	-67.73%	-65.49%	-69.06%
Income tax expense (benefit)	1.88%	-7.88%	0.19%	0.16%	0.09%	0.17%	0.02%	0.11%	0.02%	0.01%	0.01%	0.01%	0.01%
Net income (loss)	97.57%	-159.68%	-90.46%	338.06%	-25.05%	30.17%	-76.31%	58.85%	-73.03%	-70.36%	-67.74%	-65.51%	-69.08%
YEAR TO YEAR CHANGE													
Service revenue	6.16%	12.07%	18.54%	21.08%	15.20%	14.69%	12.71%	15.68%	18.43%	12.98%	8.64%	11.17%	12.61%
Depreciation and amortization	-10.33%	0.19%	0.14%	-0.33%	17.33%	27.42%	13.52%	14.50%	15.55%	-1.44%	-9.61%	1.25%	0.63%
Total operating expenses	-15.52%	2.19%	13.02%	4.84%	-21.66%	30.07%	-15.80%	-2.16%	22.77%	63.75%	-1.42%	6.71%	18.24%
Operating income (loss)	-30.54%	-4.40%	8.03%	-14.36%	-115.66%	66.42%	-50.87%	-36.15%	14.38%	-854.19%	-18.97%	-3.57%	33.16%
Total other income (expense)	-138.33%	-153.82%	-73.38%	-2121.01%	-89.63%	-57.27%	-201.66%	-652.67%	-107.60%	-15.43%	-127.54%	-6.46%	-127.10%
Income (loss) before income taxes	-115.96%	-288.82%	-36.14%	-537.12%	-92.91%	-82.71%	1.28%	-175.56%	-125.57%	218.38%	-342.54%	-4.58%	-231.91%
Income tax expense (benefit)	58.00%	-570.04%	-102.90%	13.89%	-77.36%	-23.88%	-125.64%	-36.38%	-88.33%	-80.28%	-90.82%	-4.58%	-84.41%
Net income (loss)	-115.62%	-283.41%	-32.85%	-536.14%	-92.90%	-82.79%	1.39%	-175.26%	-125.59%	217.36%	-343.96%	-4.58%	-232.17%



GLOBALSTAR (NYSE: GSAT)  
 Quarterly and Annual Balance Sheets  
 In thousands

	As of	2018 E						2019 E						
		31-Dec-15 A	31-Dec-16 A	31-Dec-17 A	31-Mar-18 A	30-Jun-18 A	30-Sep-18 A	31-Dec-18 E	31-Dec-18 E	31-Mar-19 E	30-Jun-19 E	30-Sep-19 E	31-Dec-19 E	31-Dec-19 E
Cash and cash equivalents	\$	7,476	\$ 10,230	\$ 41,644	\$ 48,810	\$ 12,806	\$ 20,462	\$ 30,379	\$ 30,379	\$ 14,885	\$ 8,935	\$ 6,249	\$ 5,779	\$ 5,779
Restricted cash		-		63,635	63,893	52,692	52,934	52,934	52,934	52,934	52,934	52,934	52,934	52,934
Accounts receivables		14,536	15,219	17,113	17,161	19,886	20,471	20,003	20,003	20,992	21,316	21,652	22,237	22,237
Inventories		12,023	8,093	7,273	7,671	7,742	13,067	9,257	9,257	9,710	9,856	10,006	10,271	10,271
Prepaid expenses & other current assets		4,456	4,588	6,745	6,526	8,879	8,800	10,142	10,142	11,689	11,748	11,807	11,866	11,866
<b>Total current assets</b>		<b>38,491</b>	<b>38,130</b>	<b>136,410</b>	<b>144,061</b>	<b>102,005</b>	<b>115,734</b>	<b>122,715</b>	<b>122,715</b>	<b>110,210</b>	<b>104,789</b>	<b>102,647</b>	<b>103,087</b>	<b>103,087</b>
Total property, plant, and equipment net		1,077,560	1,039,719	971,119	958,072	935,036	903,990	885,909	885,909	867,759	849,540	831,252	812,895	812,895
Other assets:														
Restricted cash		37,918	37,983											
Deferred financing costs		57,906												
Prepaid second-generation ground costs		8,929												
Intangible and other assets, net		12,117	16,782	21,736	24,616	31,395	38,097	38,097	38,097	38,097	38,097	38,097	38,097	38,097
<b>Total assets</b>	<b>\$</b>	<b>1,232,921</b>	<b>\$ 1,132,614</b>	<b>\$ 1,129,265</b>	<b>\$ 1,126,749</b>	<b>\$ 1,068,436</b>	<b>\$ 1,057,821</b>	<b>\$ 1,046,721</b>	<b>\$ 1,046,721</b>	<b>\$ 1,016,066</b>	<b>\$ 992,426</b>	<b>\$ 971,996</b>	<b>\$ 954,079</b>	<b>\$ 954,079</b>
Current liabilities:														
Current maturities of long-term debt	\$	32,835	\$ 75,755	\$ 79,215	\$ 79,215	\$ 87,732	\$ 87,732	\$ 94,870	\$ 94,870	\$ 97,937	\$ 101,004	\$ 104,071	\$ 100,000	\$ 100,000
Debt restructuring fees			20,795											
Accounts payable		8,693	7,499	6,048	5,625	6,988	9,525	7,334	7,334	8,588	6,578	17,489	7,859	7,859
Accrued contract termination charge		18,546	18,451	21,002	21,609									
Accrued expenses		22,439	23,162	20,754	27,891	22,890	28,999	58,714	58,714	58,714	58,714	58,714	58,714	58,714
Payables to affiliates		616	309	225	296	286	645	1,666	1,666	1,666	1,666	1,666	1,666	1,666
Derivative liabilities				1,326	5	939	617	617	617	617	617	617	617	617
Deferred revenue		23,902	26,479	31,747	31,813	33,047	35,031	37,689	37,689	38,683	39,708	40,764	41,854	41,854
<b>Total current liabilities</b>		<b>107,031</b>	<b>172,450</b>	<b>160,317</b>	<b>166,454</b>	<b>151,882</b>	<b>162,549</b>	<b>200,890</b>	<b>200,890</b>	<b>206,205</b>	<b>208,286</b>	<b>223,320</b>	<b>210,709</b>	<b>210,709</b>
Long term debt		606,192	500,524	434,651	441,309	400,727	407,615	378,544	378,544	363,544	358,544	343,544	358,544	358,544
Employee benefit obligations, net of current portion		4,810	4,883	4,389	4,452	4,458	4,450	4,450	4,450	4,450	4,450	4,450	4,450	4,450
Derivative liabilities		239,642	281,171	226,659	119,036	120,161	81,424	81,424	81,424	81,424	81,424	81,424	81,424	81,424
Deferred revenue		6,413	5,877	6,052	5,921	5,777	5,758	6,944	6,944	7,127	7,315	7,510	7,711	7,711
Debt restructuring fees		20,795												
Other non-current liabilities		10,907	5,890	5,973	5,586	4,088	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925
<b>Total non-current liabilities</b>		<b>888,759</b>	<b>798,345</b>	<b>677,724</b>	<b>576,304</b>	<b>535,211</b>	<b>503,172</b>	<b>475,287</b>	<b>475,287</b>	<b>460,470</b>	<b>455,658</b>	<b>440,853</b>	<b>456,054</b>	<b>456,054</b>
Stockholders' equity:														
Voting common stock, \$.0001 par value:		90	97	126	126	126	127	127	127	127	127	127	127	127
Nonvoting common stock \$.0001 par value		13	13											
Additional paid-in capital		1,591,443	1,649,315	1,869,339	1,871,413	1,873,147	1,874,384	1,875,728	1,875,728	1,877,072	1,878,416	1,879,760	1,881,104	1,881,104
Accumulated other comprehensive income (loss)		(4,833)	(5,378)	(6,939)	(7,269)	(4,639)	(4,139)	(4,139)	(4,139)	(4,139)	(4,139)	(4,139)	(4,139)	(4,139)
Retained earnings		(1,349,582)	(1,482,228)	(1,571,302)	(1,480,279)	(1,487,291)	(1,478,272)	(1,501,171)	(1,501,171)	(1,523,669)	(1,549,922)	(1,567,925)	(1,589,776)	(1,589,776)
<b>Total stockholders' equity</b>		<b>237,131</b>	<b>161,819</b>	<b>291,224</b>	<b>383,991</b>	<b>381,343</b>	<b>392,100</b>	<b>370,545</b>	<b>370,545</b>	<b>349,391</b>	<b>328,482</b>	<b>307,823</b>	<b>287,316</b>	<b>287,316</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$</b>	<b>1,232,921</b>	<b>\$ 1,132,614</b>	<b>\$ 1,129,265</b>	<b>\$ 1,126,749</b>	<b>\$ 1,068,436</b>	<b>\$ 1,057,821</b>	<b>\$ 1,046,721</b>	<b>\$ 1,046,721</b>	<b>\$ 1,016,066</b>	<b>\$ 992,426</b>	<b>\$ 971,996</b>	<b>\$ 954,079</b>	<b>\$ 954,079</b>



GLOBALSTAR (NYSE: GSAT)  
Quarterly and Annual Balance Sheets

SELECTED COMMON SIZE BALANCE SHEET AMOUNTS (% of net sales)	2018 E								2019 E				
	31-Dec-15 A	31-Dec-16 A	31-Dec-17 A	31-Mar-18 A	30-Jun-18 A	30-Sep-18 A	31-Dec-18 E	31-Dec-18 E	31-Mar-19 E	30-Jun-19 E	30-Sep-19 E	31-Dec-19 E	31-Dec-19 E
Accounts receivables	19.61%	18.32%	17.38%	65.98%	71.03%	68.47%	66.66%	17.56%	68.14%	67.40%	66.66%	66.66%	17.34%
Inventories	16.22%	9.74%	7.39%	29.49%	27.65%	43.71%	30.85%	8.13%	31.52%	31.16%	30.81%	30.79%	8.01%
Prepaid expenses & other current assets	6.01%	5.52%	6.85%	25.09%	31.72%	29.43%	33.80%	8.90%	37.95%	37.14%	36.35%	35.57%	9.25%
Total current assets	51.93%	45.90%	138.53%	553.87%	364.37%	387.10%	408.96%	107.73%	357.77%	331.31%	316.03%	309.03%	80.37%
Total assets	1663.32%	1363.46%	1146.78%	4331.98%	3816.52%	3538.10%	3488.32%	918.91%	3298.39%	3137.71%	2992.63%	2860.13%	743.80%
Accounts payable	11.73%	9.03%	6.14%	21.63%	0.00%	31.86%	24.44%	6.44%	27.88%	20.80%	53.84%	23.56%	6.13%
Payables to affiliates	0.83%	0.37%	0.23%	1.14%	1.02%	2.16%	5.55%	1.46%	5.41%	5.27%	5.13%	4.99%	1.30%
Total current liabilities	144.39%	207.60%	162.80%	639.96%	542.53%	543.68%	669.49%	176.36%	669.39%	658.53%	687.57%	631.66%	164.27%
Long term debt	817.81%	602.54%	441.39%	1696.69%	1431.42%	1363.35%	1261.54%	332.32%	1180.15%	1133.59%	1057.72%	1074.84%	279.52%
Employee benefit obligations, net of current portion	6.49%	5.88%	4.46%	17.12%	15.92%	14.88%	14.83%	3.91%	14.45%	14.07%	13.70%	13.34%	3.47%
Other non-current liabilities	14.71%	7.09%	6.07%	21.48%	14.60%	13.13%	13.08%	3.45%	12.74%	12.41%	12.08%	11.77%	3.06%
Total non-current liabilities	1199.02%	961.06%	688.23%	2215.70%	1911.81%	1682.96%	1583.95%	417.25%	1494.79%	1440.63%	1357.32%	1367.15%	355.54%
SELECTED COMMON SIZE BALANCE SHEET AMOUNTS (% of total assets)													
Total current assets	3.12%	3.37%	12.08%	12.79%	9.55%	10.94%	11.72%	11.72%	10.85%	10.56%	10.56%	10.80%	10.80%
Accounts payable	0.71%	0.66%	0.54%	0.50%	0.00%	0.90%	0.70%	0.70%	0.85%	0.66%	1.80%	0.82%	0.82%
Accrued expenses	1.82%	2.05%	1.84%	2.48%	2.14%	2.74%	5.61%	5.61%	5.78%	5.92%	6.04%	6.15%	6.15%
Payables to affiliates	0.05%	0.03%	0.02%	0.03%	0.03%	0.06%	0.16%	0.16%	0.16%	0.17%	0.17%	0.17%	0.17%
Deferred revenue as percent of total revenue	26.41%	27.34%	28.18%	110.66%	97.99%	106.33%	106.33%	106.33%	106.33%	106.33%	106.33%	106.33%	106.33%
Long term deferred revenue as a percent of total revenue	7.09%	6.07%	5.37%	20.60%	17.13%	19.59%	19.59%	19.59%	19.59%	19.59%	19.59%	19.59%	19.59%
Provision for bad debts to Accounts receivable				2.10%	2.06%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%
Deferred revenue	1.94%	2.34%	2.81%	2.82%	3.09%	3.31%	3.60%	3.60%	3.81%	4.00%	4.19%	4.39%	4.39%
Total current liabilities	8.68%	15.23%	14.20%	14.77%	14.22%	15.37%	19.19%	19.19%	20.29%	20.99%	22.98%	22.09%	22.09%
Long term debt	49.17%	44.19%	38.49%	39.17%	37.51%	38.53%	36.16%	36.16%	35.78%	36.13%	35.34%	37.58%	37.58%
Employee benefit obligations, net of current portion	0.39%	0.43%	0.39%	0.40%	0.42%	0.42%	0.43%	0.43%	0.44%	0.45%	0.46%	0.47%	0.47%
Other non-current liabilities	0.88%	0.52%	0.53%	0.50%	0.38%	0.37%	0.37%	0.37%	0.39%	0.40%	0.40%	0.41%	0.41%
Total non-current liabilities	72.09%	70.49%	60.01%	51.15%	50.09%	47.57%	45.41%	45.41%	45.32%	45.91%	45.36%	47.80%	47.80%
Additional paid-in capital	129.08%	145.62%	165.54%	166.09%	175.32%	177.19%	179.20%	179.20%	184.74%	189.28%	193.39%	197.16%	197.16%
Retained earnings	-109.46%	-130.87%	-139.14%	-131.38%	-139.20%	-139.75%	-143.42%	-143.42%	-149.96%	-155.77%	-161.31%	-166.63%	-166.63%
Total stockholders' equity	19.23%	14.29%	25.79%	34.08%	35.69%	37.07%	35.40%	35.40%	34.39%	33.10%	31.67%	30.11%	30.11%



GLOBALSTAR (NYSE: GSAT)  
Quarterly and Annual Statements of Cash Flows

In thousands

For the period ended	2018 E				2019 E								
	2015 A	2016 A	2017 A	31-Mar-18 A	30-Jun-18 A	30-Sep-18 A	31-Dec-18 E	2018 E	31-Mar-19 E	30-Jun-19 E	30-Sep-19 E	31-Dec-19 E	2019 E
Cash Flow From Operations:													
Net income (loss)	\$ 72,322	\$ (132,646)	(89,074)	\$ 87,930	\$ (7,012)	\$ 9,019	\$ (22,899)	\$ 67,038	\$ (22,497)	\$ (22,253)	\$ (22,003)	\$ (21,851)	\$ (88,605)
Adjustments:													
Depreciation and amortization	77,247	77,390	77,498	19,231	22,616	24,738	22,153	88,738	22,222	22,291	22,360	22,429	89,301
Change in fair value of derivatives	(181,860)	41,531	(21,182)	(108,944)	2,059	(39,059)		(145,944)					
Stock-based compensation expense	2,955	4,858	5,088	1,150	1,626	1,442	1,344	5,562	1,344	1,344	1,344	1,344	5,376
Provision for bad debts	3,357	1,256	1,256	361	410	193	340	1,304	357	362	368	378	1,465
Impairment of assets		350	17,883										
Contract termination charge					(20,478)			(20,478)					
Amortization of deferred financing costs	9,722	9,165	8,096	1,658	2,194	2,497		6,349					
Non cash interest expense	11,103	11,195	11,043	2,400	3,466	4,409		10,275					
Loss on extinguishment of debt	2,254		6,306										
Loss on future equity issuance	6,663	(2,400)	(2,670)										
Noncash expense related to legal settlement		1,094											
Reversal of uncertain tax position		(6,317)											
Foreign currency and other, net	(3,597)	144	2,159	590	3,289	(1,400)		2,479					
Other, net	(11)	1,154	(260)	(40)	235	784		979					
Changes in operating assets and liabilities, net of acquisition													
Accounts receivable	(3,454)	(2,196)	(2,983)	(269)	(3,383)	(834)	128	(4,358)	(1,345)	(687)	(703)	(963)	(3,700)
Inventory	1,118	4,571	50	(403)	(221)	2,007	3,810	5,193	(453)	(146)	(150)	(265)	(1,014)
Prepaid expenses and other current assets	326	(488)	(2,504)	13	(2,381)	(1,958)	(1,342)	(5,668)	(1,547)	(58)	(59)	(59)	(1,723)
Other assets	(774)	(469)	(699)	172	(3,937)	9		(3,756)					
Accounts payable	702	102	(1,114)	5,365	(1,077)	8,062	27,523	39,873	1,254	(2,010)	10,911	(9,630)	525
Payables to affiliates	135	(307)	(84)	71	(10)	359	1,021	1,441					
Other non-current liabilities	1,332	(1,163)	105	(104)	(751)	(172)		(1,027)					
Deferred revenue	2,622	1,989	4,943	651	1,328	1,867	3,844	7,690	1,177	1,213	1,251	1,290	4,931
Net cash provided by (used in) operating activities	2,162	8,813	13,857	9,832	(2,027)	11,963	35,922	55,690	510	55	13,319	(7,327)	6,557
Cash flows from investing activities													
Spare and second-generation satellites and launch costs	(25,195)	(13,170)	(11,910)	(341)	(3,936)	(1,610)	(2,414)	(8,301)	(2,414)	(2,414)	(2,414)	(2,414)	(9,657)
Property and equipment additions	(5,523)	(9,385)	(5,525)	(1,397)	(1,824)	(2,125)	(1,658)	(7,004)	(1,658)	(1,658)	(1,658)	(1,658)	(6,630)
Investment in business	(240)		455										
Purchase of intangible assets	(2,520)	(1,996)	(3,796)	(648)	(753)	(547)		(1,948)					
Restricted cash		(65)											
Net cash used in investing activities	(33,478)	(24,616)	(20,776)	(2,386)	(6,513)	(4,282)	(4,072)	(17,253)	(4,072)	(4,072)	(4,072)	(4,072)	(16,287)
Cash flows from financing activities													
Borrowings from facility agreement									10,000	20,000	10,000	40,000	80,000
Principal payments of the Facility Agreement	(6,450)	(32,835)	(75,755)		(38,933)		(21,933)	(60,866)	(21,933)	(21,933)	(21,933)	(29,071)	(94,870)
Payments for 5.75% notes not exchanged			(654)										
Payments to lenders and other fees associated with exchange			(20,795)										
Proceeds from equity contributions			33,000										
Proceeds from exercise of warrants and stock options	726	3,337	1,001		319	76		395					
Proceeds from issuance of stock to Terrapin and Thermo	39,000	48,000	12,000										
Equity offering			114,993										
Net cash provided by (used in) financing activities	33,276	18,502	63,790	-	(38,614)	76	(21,933)	(60,471)	(11,933)	(1,933)	(11,933)	10,929	(14,870)
Effect of exchange rate on cash	(1,605)	55	195	(22)	(51)	141		68					
Increase (decrease) in cash and cash equivalents	355	2,754	57,066	7,424	(47,205)	7,898	9,917	(21,966)	(15,494)	(5,949)	(2,686)	(470)	(24,600)
Cash and cash equivalents at beginning of year	7,121	7,476	48,213	105,279	112,703	65,498	73,396	105,279	83,313	67,819	61,869	59,183	83,313
Cash and cash equivalents at end of year	7,476	48,213	105,279	112,703	65,498	73,396	83,313	83,313	67,819	61,869	59,183	58,713	58,713
Operating cash flow per share													
excluding changes in working capital	\$ (0.0021)	\$ 0.0077	\$ 0.0086	\$ 0.0027	\$ (0.0012)	\$ 0.0013	\$ 0.0033	\$ 0.0062	\$ (0.0018)	\$ 0.0008	\$ 0.0011	\$ 0.0009	\$ 0.0010
Operating cash flow per share													
including changes in working capital	\$ 0.00	\$ 0.01	\$ 0.01	\$ 0.01	\$ (0.00)	\$ 0.01	\$ 0.03	\$ 0.05	\$ 0.00	\$ 0.00	\$ 0.01	\$ (0.01)	\$ 0.01



GLOBALSTAR (NYSE: GSAT)

Ratios

For the period ended	2015 A	2016 A	2017 A	2018 E				2018 E	2019 E				2019 E
				31-Mar-18 A	30-Jun-18 A	30-Sep-18 A	31-Dec-18 E		31-Mar-19 E	30-Jun-19 E	30-Sep-19 E	31-Dec-19 E	
<b>Productivity Ratios</b>													
Receivables turnover	5.02	5.58	6.09	1.52	1.51	1.48	1.48	6.14	1.50	1.50	1.51	1.52	6.07
Inventory turnover	3.17	4.16	6.11	1.50	1.78	1.33	1.31	6.45	1.58	1.57	1.59	1.60	6.38
Working capital turnover	-1.44	-0.82	-1.24	-1.12	-0.77	-0.62	-0.48	-2.23	-0.35	-0.32	-0.29	-0.29	-1.38
Net fixed asset turnover	0.07	0.08	0.10	0.03	0.03	0.03	0.03	0.12	0.04	0.04	0.04	0.04	0.15
Total asset turnover	0.06	0.07	0.09	0.02	0.03	0.03	0.03	0.10	0.03	0.03	0.03	0.03	0.13
# of days Sales in A/R	72	67	63	59	65	63	61	64	61	61	61	61	63
# of days Cost of Sales in Inventory	103	71	57	62	51	87	58	63	58	58	58	58	60
# of days Cash-based expenses in payables	100	95	82	102	53	214	172	167	169	163	211	162	165
<b>Liquidity Measures</b>													
Current ratio	0.36	0.22	0.85	0.87	0.67	0.71	0.61	0.61	0.53	0.50	0.46	0.49	0.49
Quick ratio	0.21	0.15	0.37	0.40	0.22	0.25	0.25	0.25	0.17	0.15	0.12	0.13	0.13
Cash ratio	0.21	0.15	0.37	0.40	0.22	0.25	0.25	0.25	0.17	0.15	0.12	0.13	0.13
Cash flow from operations ratio	0.02	0.05	0.09	0.06	-0.01	0.07	0.18	0.28	0.00	0.00	0.06	-0.03	0.03
Working capital	-68,540	-134,320	-23,907	-22,393	-49,877	-46,815	-78,175	-78,175	-95,995	-103,497	-120,673	-107,623	-107,623
<b>Financial Risk (Leverage) Ratios</b>													
Total debt/equity ratio	4.20	6.00	2.88	1.93	1.80	1.70	1.82	1.82	1.91	2.02	2.16	2.32	2.32
Debt/equity ratio (excluding deferred taxes)	4.20	6.00	2.88	1.93	1.80	1.70	1.82	1.82	1.91	2.02	2.16	2.32	2.32
Total LT debt/equity ratio	3.75	4.93	2.33	1.50	1.40	1.28	1.28	1.28	1.32	1.39	1.43	1.59	1.59
LT debt/equity (excluding deferred taxes)	3.75	4.93	2.33	1.50	1.40	1.28	1.28	1.28	1.32	1.39	1.43	1.59	1.59
Interest coverage ratio (Earnings = EBIT)	1.06	-4.87	-3.56	10.96	-1.68	-0.32	-3.88	0.72	-3.93	-3.94	-3.96	-3.94	-3.94
Interest coverage ratio (Earnings = EBI)	1.02	-4.69	-3.56	10.96	-1.68	-0.32	-3.88	0.72	-3.93	-3.94	-3.96	-3.94	-3.94
Total debt ratio	0.81	0.86	0.74	0.66	0.64	0.63	0.65	0.65	0.66	0.67	0.68	0.70	0.70
Debt ratio (excluding deferred taxes)	0.81	0.86	0.74	0.66	0.64	0.63	0.65	0.65	0.66	0.67	0.68	0.70	0.70
<b>Profitability/Valuation Measures</b>													
Gross profit margin	211.93%	193.26%	184.26%	160.35%	113.51%	179.46%	167.94%	155.85%	166.22%	164.52%	162.85%	161.21%	163.65%
Operating profit margin	-89.85%	-76.65%	-69.85%	-49.82%	6.96%	-60.08%	-49.81%	-38.55%	-48.11%	-46.45%	-44.81%	-43.20%	-45.59%
Return on assets	5.78%	-11.21%	-7.88%	7.80%	-0.64%	0.85%	-2.18%	6.16%	-2.18%	-2.22%	-2.24%	-2.27%	-8.86%
Return on equity	45.77%	-66.50%	-39.32%	26.05%	-1.83%	2.33%	-6.01%	20.26%	-6.25%	-6.57%	-6.92%	-7.34%	-26.94%
Earnings before interest margin	49.20%	-202.96%	-125.77%	309.79%	-61.86%	-14.51%	-102.80%	24.65%	-97.93%	-94.25%	-90.66%	-87.79%	-92.55%
EBITDA margin	14.36%	16.51%	8.85%	24.12%	87.74%	22.66%	24.02%	39.35%	24.02%	24.03%	24.03%	24.03%	24.03%
EBITDA/Assets	0.81%	1.07%	0.69%	0.55%	2.26%	0.63%	0.66%	3.71%	0.69%	0.74%	0.77%	0.80%	2.77%

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## **BURKENROAD REPORTS RATING SYSTEM**

**MARKET OUTPERFORM:** This rating indicates that we believe forces are in place that would enable this company's stock to produce returns in excess of the stock market averages over the next 12 months.

**MARKET PERFORM:** This rating indicates that we believe the investment returns from this company's stock will be in line with those produced by the stock market averages over the next 12 months.

**MARKET UNDERPERFORM:** This rating indicates that while this investment may have positive attributes, we believe an investment in this company will produce subpar returns over the next 12 months.

## **BURKENROAD REPORTS CALCULATIONS**

- CPFS is calculated using operating cash flows excluding working capital changes.
- All amounts are as of the date of the report as reported by *Bloomberg* or *Yahoo Finance* unless otherwise noted. Betas are collected from *Bloomberg*.
- Enterprise value is based on the equity market cap as of the report date, adjusted for long-term debt, cash, & short-term investments reported on the most recent quarterly report date.
- 12-month Stock Performance is calculated using an ending price as of the report date. The stock performance includes the 12-month dividend yield.

## **2018-2019 COVERAGE UNIVERSE**

Amerisafe Inc. (AMSF)

Business First Bank (BFST)

Bristow Group Inc. (BRS)

Callon Petroleum Company (CPE)

Cal-Maine Foods Inc. (CALM)

Computer Programs & Systems, Inc. (CPSI)

Conn's Inc. (CONN)

Crown Crafts Inc. (CRWS)

Daseke Inc. (DSKE)

Denbury Resources Inc. (DNR)

EastGroup Properties Inc. (EGP)

First Bancshares (FBMS)

First Guaranty Bancshares Inc. (FGBI)

Globalstar (GSAT)

Gulf Island Fabrication Inc. (GIFI)

Hibbett Sports (HIBB)

Home Bancorp, Inc. (HBCP)

Hornbeck Offshore Services Inc. (HOS)

Houston Wire & Cable Company (HWCC)

IBERIABANK Corp. (IBKC)

Investar Holding Corp. (ISTR)

ION Geophysical Corp. (IO)

Lamar Advertising Company (LAMR)

LHC Group, Inc. (LHCG)

Marine Products Corp. (MPX)

MidSouth Bancorp Inc. (MSL)

National Vision Inc. (EYE)

Newpark Resources Inc. (NR)

Peoples Financial Corp (PFBX)

Pool Corporation (POOL)

Powell Industries Inc. (POWL)

RPC Incorporated (RES)

Ruth's Hospitality Group Inc. (RUTH)

Sanderson Farms Inc. (SAFM)

SEACOR Holdings Inc. (CKH)

Sharps Compliance Inc. (SMED)

Spark Energy Inc. (SPKE)

Superior Energy Services Inc. (SPN)

Team Incorporated (TISI)

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